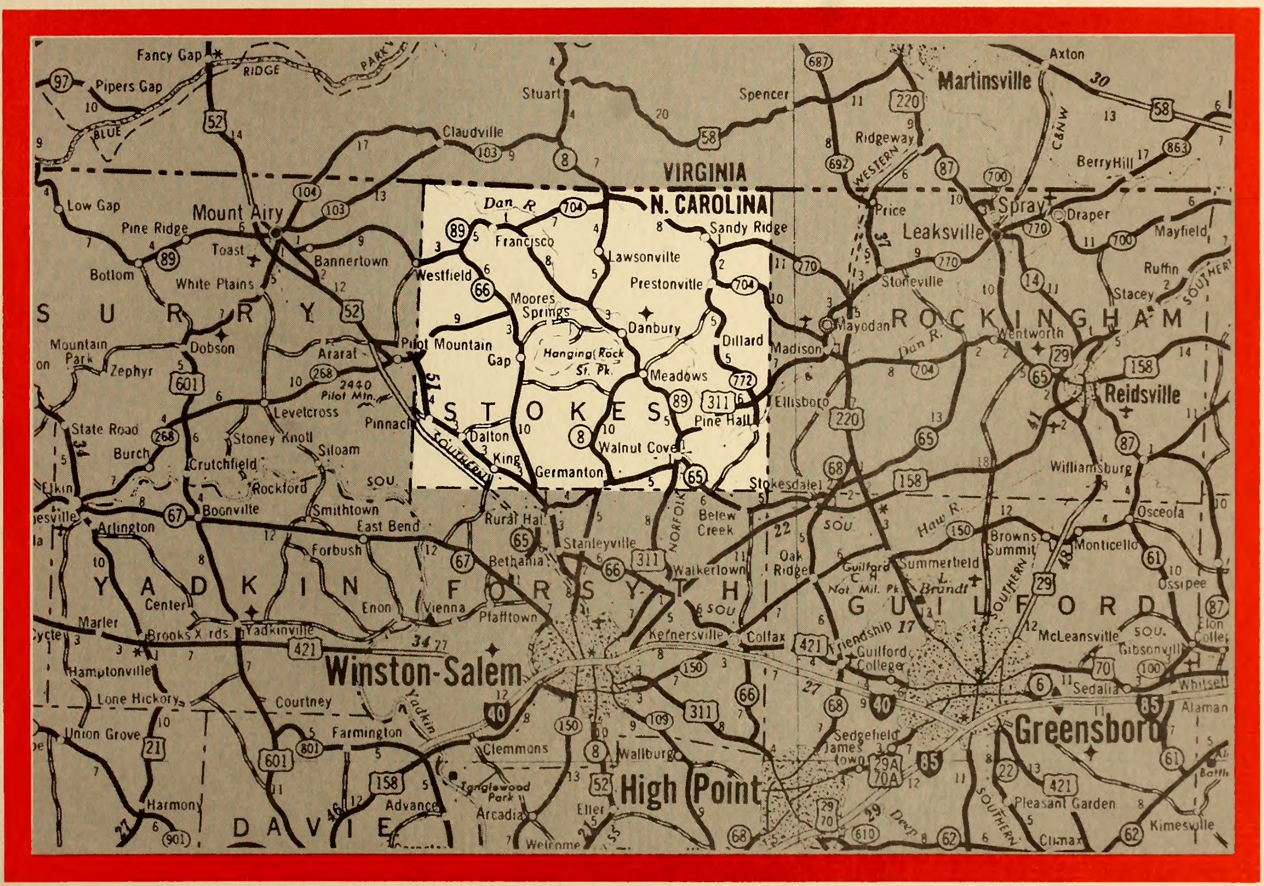
NA3
11:S87
C.2

North Carolina State Library
Raleigh

N. C.
Doc.

ECONOMIC AND LAND POTENTIAL STUDIES AND LAND DEVELOPMENT PLAN



STOKES COUNTY, NORTH CAROLINA

ABSTRACT

TITLE	Economic and Land Potential Studies and Land Development Plan for Stokes County, North Carolina
AUTHOR	North Carolina Department of Local Affairs, Division of Community Planning, Piedmont Area Office, P.O. Box 300, Salisbury, North Carolina 28144
DATE	September, 1969
LOCAL PLANNING AGENCY	Stokes County Planning Board, Stokes County, North Carolina
SOURCE OF COPIES	Stokes County Court House, Danbury, North Carolina Department of Local Affairs, Division of Community Planning, P.O. Box 2719, Raleigh, North Carolina 27602 Clearinghouse for Federal Scientific and Technical Information, Washington, D. C.
HUD PROJECT NUMBER	NCP 80
SERIES NUMBER	One, Two, and Three (of Six)
NUMBER OF PAGES	96

ABSTRACT

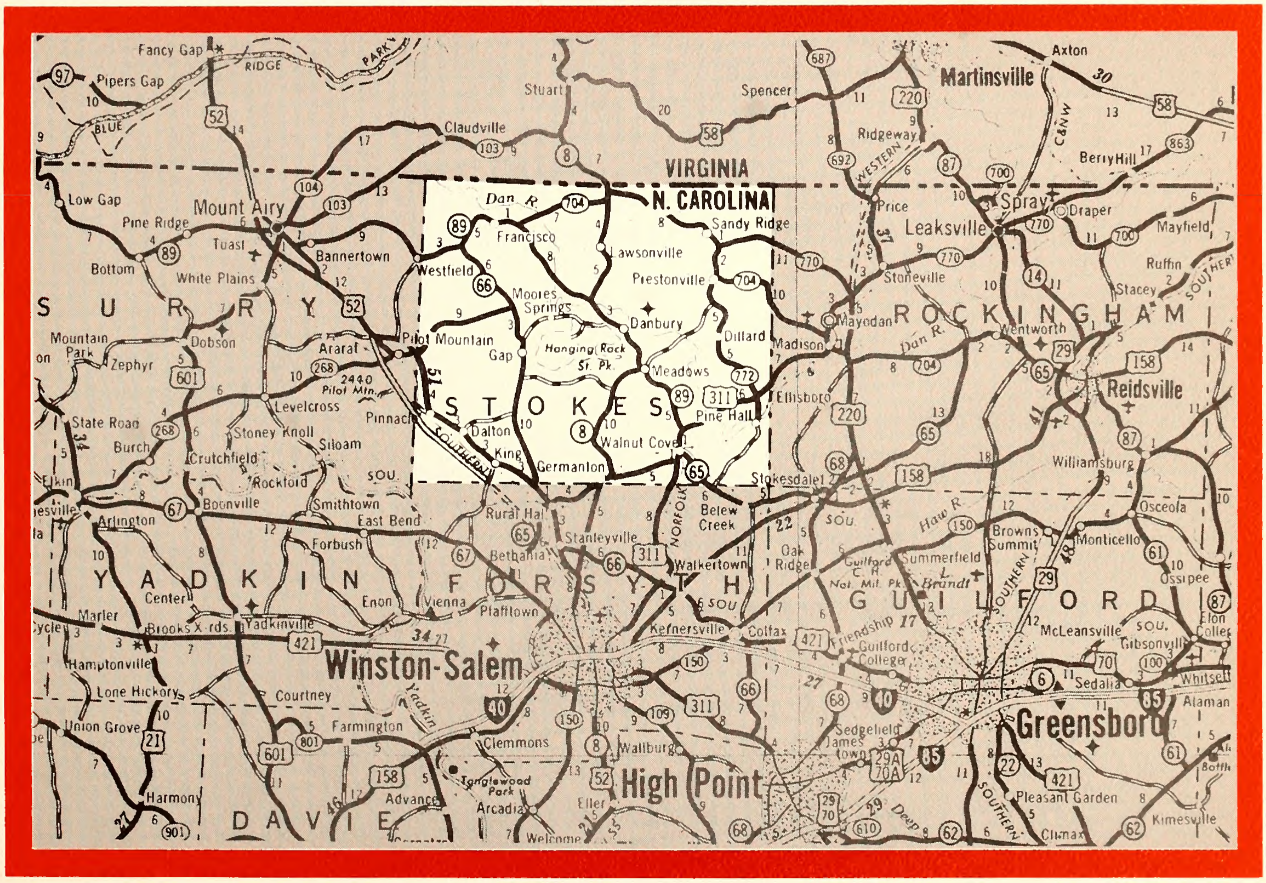
Stokes County is predominately rural in character, but is urbanizing rapidly in its southern sections since 1963 as a result of the opening of an interstate-standard expressway linking it to Winston-Salem (a twenty-minute driving time). In the northern half rises the unspoiled Sauratown Mountains, making the county unique in that the range is located entirely within its borders. Field counts indicate a 16% population increase since 1960 (to 26,701).

An inventory of the population and economic resources is analyzed along with the county's natural and man-made features and resources, to arrive at a land development plan taking into account the widely different types of potential in the northern and southern sections. Residential and industrial development is anticipated in the south, while it is recommended that the north concentrate on intensive but well-controlled recreation and tourism. Also, a low- an middle-income housing program has been developed by combining resources of local citizens groups, the Stokes Community Action Program, and the Farmers Home Administration.

Digitized by the Internet Archive
in 2012 with funding from
LYRASIS Members and Sloan Foundation

http://archive.org/details/economiclandpote1969stok

ECONOMIC AND LAND POTENTIAL STUDIES AND LAND DEVELOPMENT PLAN



STOKES COUNTY, NORTH CAROLINA

The preparation of this report was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provision of Section 701 of the Housing Act of 1954, as amended.

PREPARED FOR:

Stokes County Board of Commissioners

Dr. William J. Helsabeck, Chairman, King
Ellis Boyles, King
Lee E. Dunlap, Walnut Cove
Ralph D. Tuttle, Walnut Cove
Fred Young, Walnut Cove

PREPARED BY:

Stokes County Planning Board

Robert G. Rierson, Chairman, King
Ellis Durham, Westfield
John L. Hairston, Pine Hall
Charles G. Hill, Walnut Cove
J. B. Joyce, Danbury
Odell T. Neal, Walnut Cove
John Nelson, Madison
Willis H. Overby, Danbury
Lester Sheppard, Westfield

TECHNICAL ASSISTANCE
PROVIDED BY:

THE STATE OF NORTH CAROLINA
DEPARTMENT OF LOCAL AFFAIRS
DIVISION OF COMMUNITY PLANNING

George J. Monaghan, Administrator

PIEDMONT AREA OFFICE

Mathey A. Davis, Director

PROJECT STAFF

Mark B. Sullivan, Planner-in-Charge
Paul L. Trexler, Draftsman
Perry Whisnant, Draftsman
Paula Craddock, Research Analyst
M. Eileen Antosek, Secretary

September, 1969 Price: $2.00

TABLE OF CONTENTS

Page

I. ECONOMIC POTENTIAL STUDY

A. Introduction 1
The Planning Area 2
Map #1 - Regional Setting (Follows page 2)
History 2
Regional Comparison Group 4

B. Population Trends and Characteristics . 4
Table #1 - Recent Population Trends and 1968 Estimated Population 5
Race, Age, and Sex 7
Table #2 - Stokes County Population Age Profile, 1960 . . . 9
Education 10
Income 10
Table #3 - Continuing Education in Stokes County . . 11
Characteristics of the Labor Force . . . 13

C. Economic Activities 14
Table #4 - Economic Activities, Stokes County . . . 15
Retailing Activity 15
Service-Trades Activity 16
Wholesale Activity 16
Industrial Activity 16

D. The Basis for Future Economic Growth . . 17
Future Population 17
The Future Labor Force 19

E. Likely Future Economic Growth Trends . . 21

F. Conclusion 25

G. Goals for the Future 26

Page

II. LAND POTENTIAL STUDY

H. Natural Features

Topography and Drainage 29

Map #2 - Generalized Topography and Drainage (Follows page 30)

Climatic Data 31

I. Natural Resources

Open Space 33

Mineral Resources 35

Soils 37

Table #5 - Soil Interpretation 38

Map #3 - Generalized Soils (Follows page 38)

Water Resources 40

Map #4 - Water Classification (Follows page 40)

Air Resource 43

J. Man-Made Features

Roads 44

Map #5 - Selected Traffic Volumes (Follows page 44)

Mass Transportation 45

Map #6 - Transportation (Follows page 46)

Major Utilities 48

K. Existing Land Use

Residential 49

Map #7 - Existing Land Use (Follows page 48)

Table #6 - Housing Condition and Occupancy 51

Agricultural 53

Commercial 54

Industrial 55

Public and Institutional 56

Page

L. Conclusion 60

III. LAND DEVELOPMENT PLAN

M. Introduction 61

N. Future Land Use Requirements 62

Table #7 - Stokes County Existing Land Use Quantities and Projected Needs . . 64

O. Land Development Factors 65

Table #8 - Qualitative Land Development Factors Correlated to Possible Land Uses . 66

Table #9 - Qualitative Land Development Factors Generally Correlated to Portions of Stokes County 69

Map #8 - Land Potential (Follows page 68)

P. The Development Plan

Agricultural Element 71
Industrial Element 72

Map #9 - Land Development (Follows page 72)

Residential Element 74
Public and Institutional Element 78
Recreation and Tourism 79
Commercial Element 82
Transportation Element 84

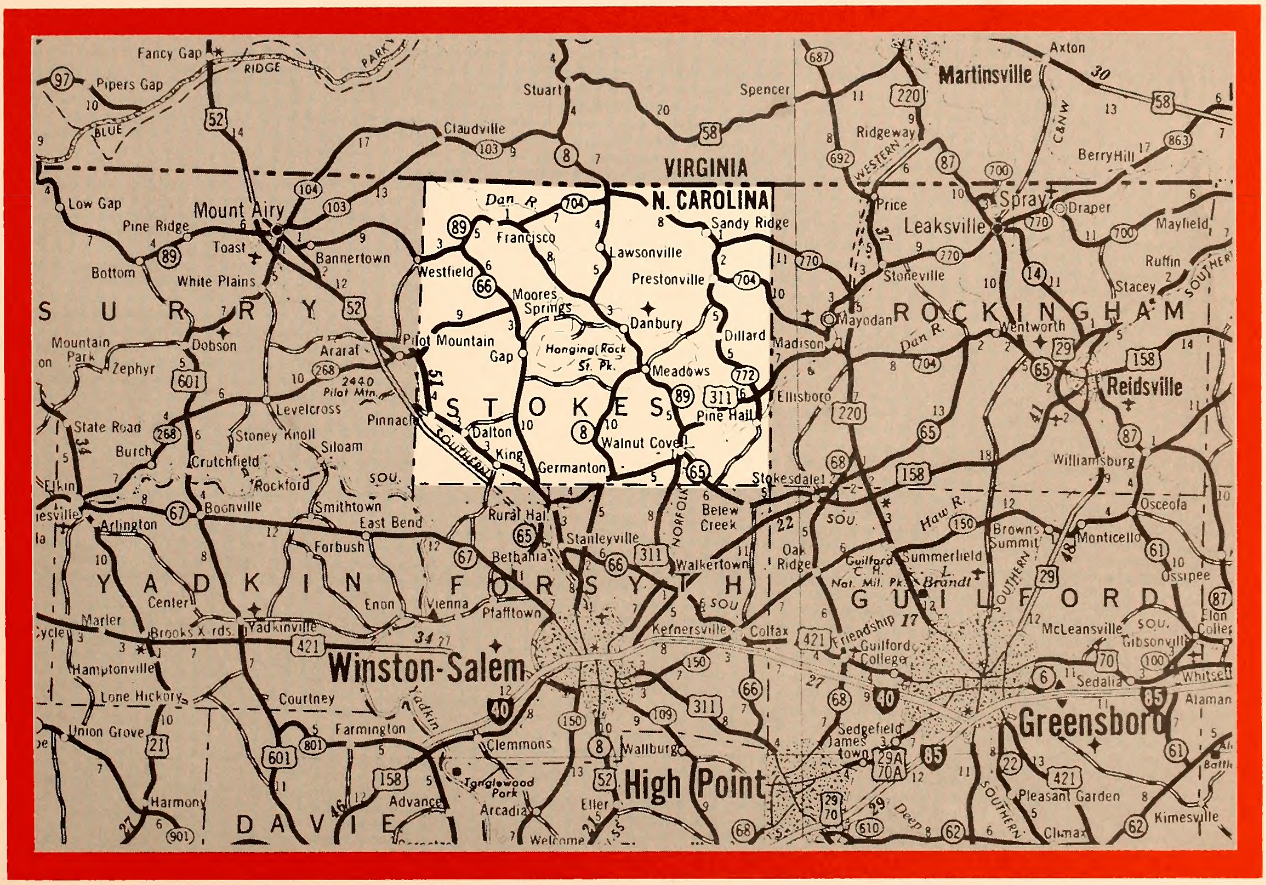
Map #10 - Proposed Sketch Thoroughfare Plan (Follows page 84)

Page

Q. Implementation
   Zoning 91
   Subdivision Regulation 92
   Improvements Program 92
   Other Tools 92
   Citizen Participation 94
   Priority Program 94

APPENDIX

1. 1910 to 1960 Population for Comparison Counties i
2. 1960 Population Age Groups by Comparison Counties ii
3. Education in Stokes County Compared with Surrounding Counties, by Per Cent of Population ii
4. Family Incomes, Distribution and Percentage of Change, 1949-1950, as Compared with Surrounding Counties iii
5. Family Income by Selected Areas, in Dollars, 1959 iii
6. 1959 Family Income by Minor Civil Divisions, Stokes County iv
7. Stokes County Commuting Patterns, 1960 . . . v
8. Employment by Industry, Stokes County, 1960 . vi
9. Industry in Stokes County, 1969 vii
10. Farm Census Summary viii



ECONOMIC POTENTIAL STUDY

I. ECONOMIC POTENTIAL STUDY

A. INTRODUCTION

Planning for a town, county, or other urbanizing area is simply the wise use of energy and foresight. Noting the need for planning, the County officials of Stokes County contracted with the North Carolina Department of Conservation and Development, Division of Community Planning, in April, 1968, for technical assistance in preparing a comprehensive planning program for Stokes County. This work will be accomplished by the Stokes County Planning Board with technical assistance from the Division of Community Planning staff.

The work elements of the Stokes Planning Program deal with the following:

I Economic Potential Study
II Land Potential Study
III Land Development Plan
IV Community Facilities Plan
V Public Improvements Program
VI Zoning Ordinance

and will include recommendations programmed for a twenty-year planning period (1968-1988).

THE PLANNING AREA

Stokes County presently comprises 268,386 acres (459 square miles) of land on the northern perimeter of Piedmont North Carolina. The Sauratown Mountain range rises and falls completely within the county borders, a fact which in itself makes the county unique. The Dan River runs diagonally across the county for a distance of about 30 miles. Walnut Cove is the largest incorporated area, Danbury is the County Seat, and Germanton is the third in size. The largest urban center in the county is the unincorporated town of King. The nine townships in Stokes County may be seen on Map 1.

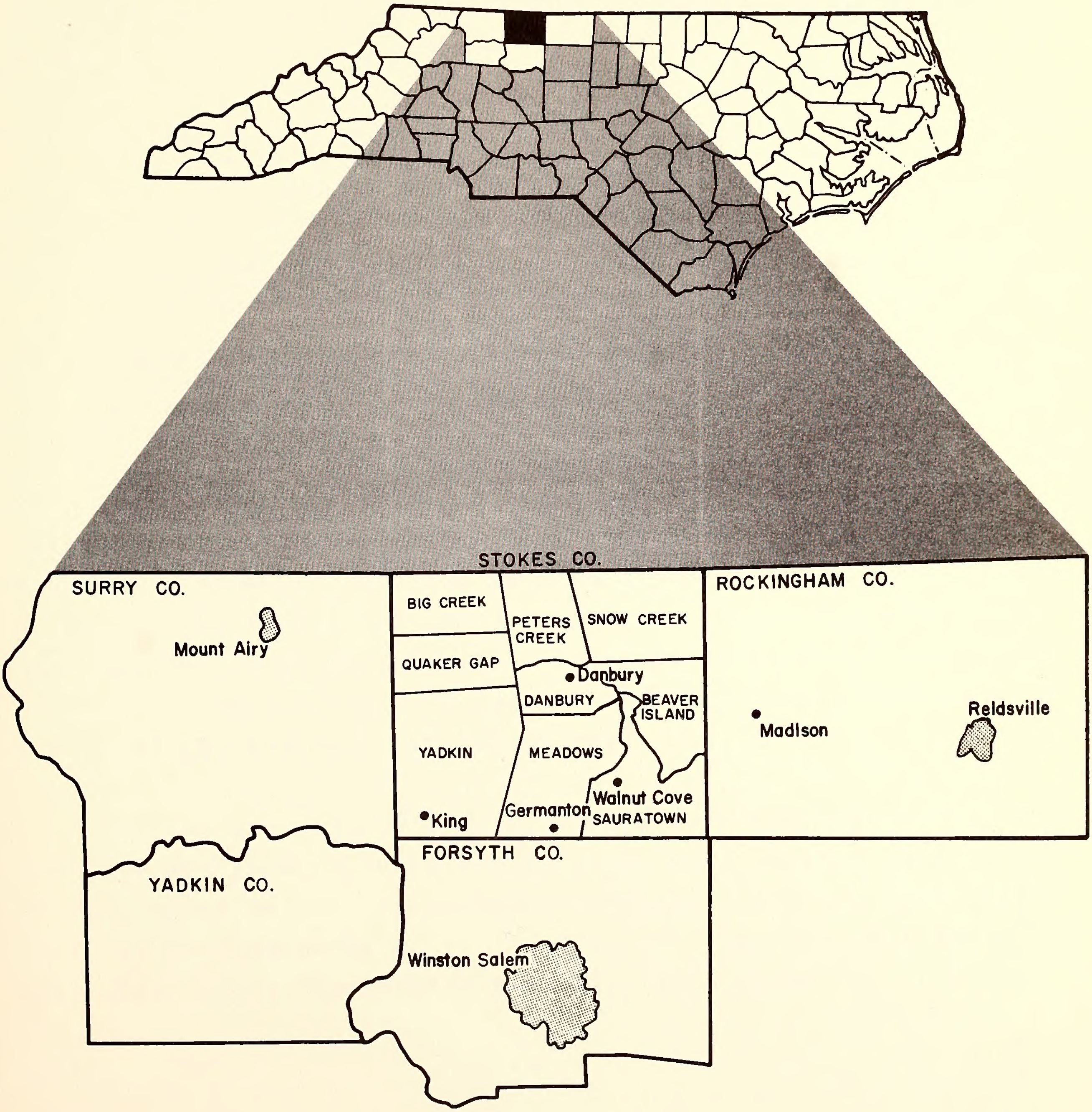
HISTORY

Stokes was formed in 1789 from Surry County. It was named in honor of Colonel John Stokes, a soldier of the Revolution, who was later named by George Washington as the first Federal District Court Judge in the State of North Carolina. The separation from Surry County took place in 1790, and a second partitioning in 1849 divided the original area into Stokes and Forsyth Counties.

Today there are almost no traces of the iron works that were so important to Stokes County around the time of the Revolutionary War, even though four of five smelters in the Western Piedmont prior to 1800 were located there. They did, however, influence the selection of the new County Seat of Danbury, in 1851 -- although at that time it was only the site for a tavern. The county judges and surveyors at that time felt that it was not only a center of the flourishing iron industry, but was also the hub of north-south road travel and an important port for flat boats on the Dan River.

REGIONAL SETTING

STOKES COUNTY, SHOWING TOWNSHIPS
AND THE SURROUNDING COMPARISON COUNTIES



The iron works died with the Confederacy, and from the 1870's until the 1920's, Stokes County's main claim to fame was its three mineral springs resorts, located just north of the present state park site at Hanging Rock.

The three biggest factors influencing settlement patterns and growth in the county have been:

1. Transportation patterns. North-south travel routes tended to avoid Stokes County's highlands, although the main oxen road from the mountains down to the markets in Old Salem and Winston generally followed the present route of US 52.
2. Proximity to Winston-Salem. A factor which today is perhaps more important than it ever was.
3. The lateral separation of the Sauratown range. This blocks access to the northern part of the county, and generally accounts for the increased development in the southern part of Stokes today.

The southeast portion of the county, with its center of Walnut Cove, developed as the first center of population and industry. Presumably this was because of its proximity to Winston-Salem and the service of the Norfolk and Western Railroad. The southwestern section of King and Pinnacle developed later, largely because of the influence of the Atlantic and Yadkin Railroad (now a part of the Southern Railway system).

The entire county suffered heavily from the depression, with the Town of Pinnacle being almost wiped out. Walnut Cove, like so many other cities in the United States, found its municipal finances over-extended after the "crash" came, and this factor has helped stunt its development until very recently.

REGIONAL COMPARISON GROUP

In the following sections, where Stokes will be examined in detail, a comparison group of five counties that border on the county will be utilized:

> Forsyth County, on the south, is the urban center for the region, has the highest growth rate, and is a useful comparison since it is the major urban influence.
>
> Surry County, to the west, is in many ways analagous to Stokes in settlement, terrain, etc. It developed "old" industry where Stokes did not, and was further fortified by the granite natural resource. It differs in having the influence upon its growth of a town as large as Mt. Airy.
>
> Rockingham County is contiguous on the east, and relevant since the eastern and northeastern sections of Stokes are tied to it economically. Its internal economic situation, however, is not necessarily analagous to that of Stokes.
>
> Yadkin County, to the southwest, is useful for comparison purposes because of its similarity to Stokes in both its lack of industrial development (i.e., its relative dependence on agriculture until recently), and its relationship to the Forsyth County urban center.

B. POPULATION TRENDS AND CHARACTERISTICS

Although the growth rate for all counties in the comparison group has been generally uniform since 1910, Stokes had the lowest growth rate up until 1960. In examining the population trend by township, fluctuations in rate of population growth or decline have been fairly large, but this has been more apparent than real in all but Yadkin Township. With the overall county growth rate at 3.1% from 1910 until 1960, the percentage fluctuations have been largely a matter of working with fairly small absolute population figures to begin with (see Table 1).

Table 1 Recent Population Trends, and Estimated 1968 Population, Stokes County

	1950 U.S. Census Population	1960 U.S. Census Population	Per Cent Change	1968 Estimated* Population	Per Cent Change
Beaver Island Township	1,889	2,002	+5.7	1,935	-3.4
Big Creek Township	2,094	1,794	-14.3	1,948	+8.0
Danbury Township:	722	606	-16.1	692	+12.4
(Danbury Town)	n/a	175		229	+23.6
Meadow Township:	2,182	2,704	+23.9	2,872	+5.1
(Germanton Town)	118	162	+37.3	165	+1.8
Peters Creek Township	1,995	1,633	-18.2	1,890	+31.5
Quaker Gap Township	1,733	1,380	-20.4	1,558	+11.4
Sauratown Township	3,130	3,453	+10.3	4,048	+14.7
(Walnut Cove Town)	1,132	1,288	+13.8	1,398	+7.9
Snow Creek Township	2,577	2,546	-1.2	3,040	+16.3
Yadkin Township	5,198	6,196	+19.2	8,671	+28.6
STOKES COUNTY	21,520	22,314	+3.7	26,701	+16.4

*Arrived at by Division of Community Planning, 1968, field survey count of dwelling units. Single-family unit count multiplied by 1960 Census' average of 3.75 persons per household. Multi-family units and mobile homes multiplied by an average of 2.5 persons per household.

Source: U. S. Census of Population and Division of Community Planning

During the 1930's, large families began leaving the farms. In the 1940's, this exodus continued and was joined by the tenant farmers. During that decade the towns began to show decreases reflecting the loss of the farm support function without the addition of any new functions to replace it. During the decade of the 1950's, incoming industry and commerce began to slowly reverse this trend in the southern part of the county, assisted almost equally by the gain and retention of outcommuters.

Estimates of the 1968 population (Table 1) show increases for peripheral townships that seem to be related to the degree of residents' outcommutation. Yadkin Township ranks first -- and has the best access to the largest number of employment centers. Sauratown Township is second, with relatively good access to both Winston-Salem and Greensboro. Snow Creek Township has become the home of a number of persons employed in Rockingham County. The 31.6% (257) population growth in Peters Creek Township since 1960 probably reflects the growth of the Stuart, Virginia, employment center. Beaver Island is the only township to have actually lost population between 1960 and 1968.

Stokes County's estimated population increase of 16.4% (4,387) from 1960 to 1968 is a healthy one. It serves as a good indication of the need for planning and guiding the county's future growth.

The rate of growth of the number of households is increasing considerably faster than the overall county growth rate, according to the recent Stokes Water and Sewer Study (John C. Grey Associates, Greensboro). Since a majority of the new households are presumably started by young people, however, it is likely that the number of persons per household will either stabilize or rise very slowly again.

Outmigration from Stokes has not been much different from the other rural counties in the comparison group. A study done for the State of North Carolina and the Appalachian Regional Council predicts that by the next census, outmigration for the region in general will be greatly reduced.

In another aspect of the migration trend, the 1960 census figures showed an expected loss of young adults of about 35% between 1950 and 1960, and a similarly expected higher loss of young males than females. Even though this loss of young adults may slow as job opportunities increase in and around the county, it is doubtful that it can ever be reversed in view of the high mobility of young people in the present society.

RACE, AGE, AND SEX

Stokes' Black population stands somewhat under the national average at 10% -- up from 1,932 in 1950 to 2,269 in 1960. It is increasing at the rate of about 1% per decade, or approximately the same as for the rest of the rural counties in the county comparison group, but considerably under that of the white population.

Interestingly enough, Stokes is the only county in the comparison group in which the Black population is migrating at a slower rate than the white. This might be accounted for in that the Black farm loss has gone down as far as it is going to go; and that a high percentage of semi-skilled Blacks in the southeastern section of the county were able to get out-commuting jobs in industry after having been laid off upon the closing of the pipe plant (about 1960). Both of these conjectures are only that, and would take much more detailed field research to confirm, but the theory seems to be supported by other characteristics. Stokes' Black population has always been more at the level of the Central Piedmont, rather than the other counties in the Northern Piedmont. Since the Black population profile is fairly normal as to the distribution of the lower age groups, it would tend to support the above theory that the older Black farm tenant families have left, and that the out-commuting Blacks remaining have started a whole new generation of families. (See County Population Age Profile.)

The outline of Stokes age profile is nearly a normal one, except for the characteristic of there being fewer people represented in the 20-30 age group than there perhaps should be. This, of course, reflects the outmigration of young adults. Considering their departure, the number of younger children represented seems to be fairly substantial.

Very often a rural county will tend to have an abnormally high number of older people, but this is not the case. Stokes median age in 1960 was lower by three years (at 26.7 years) than that of the other most rural comparison county, and only slightly higher than that of the State as a whole. The only reasoning that comes to mind to explain this is:

> It is known that the overall migration rate is the same for Stokes as for Surry and Yadkin, the other two most comparable counties. Also, the number of persons per household is higher (at 3.75) in Stokes than in the other two. If it is assumed that the migration rate of young adults in Stokes is more nearly "normal" than has been assumed up until now, this would then explain the lower median age and stable number of children. Put another way: the number of young adults has remained at a level sufficient to continue a normal natural increase in the population, so that there is not an unusually larger proportional group of older people left in the county after migration has taken place. This is further borne out by the high outcommuting to jobs, and the lack of other than rural families (with their generally associated larger family size).

Table 2 Stokes County Population Age Profile, 1960 (x=50 persons)

AGE		NUMBER
85+	xx	92
80-84	xxxx	204
75-79	xxxxxxx	342
70-74	xxxxxxxxxx	511
65-69	xxxxxxxxxxxxx	659
60-64	xxxxxxxxxxxxxx	737
55-59	xxxxxxxxxxxxxxxxxxxx	987
50-54	xxxxxxxxxxxxxxxxxxxxxx	1,100
45-49	xxxxxxxxxxxxxxxxxxxxxxxxxxx	1,365
40-44	xxxxxxxxxxxxxxxxxxxxxxxxxxx	1,362
35-39	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	1,474
30-34	xxxxxxxxxxxxxxxxxxxxxxxxxxxx	1,434
25-29	xxxxxxxxxxxxxxxxxxxxxxxxxx	1,339
20-24	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	1,499
15-19	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	2,092
10-14	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	2,378
5-9	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	2,372
0-4	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	2,367
Median Age: 26.7 Years	Total	22,314

Stokes County Black Population Age Profile, 1960 (x-50 persons or less

75+	x	32
70-74	x	30
65-69	x	42
60-64	x	43
55-59	xx	80
50-54	xx	69
45-49	xx	87
40-44	xxx	112
35-39	xxx	119
30-34	xxx	150
25-29	xxx	133
20-24	xxxx	164
15=19	xxxxx	223
10-14	xxxxxx	286
5-9	xxxxxxx	340
0-4	xxxxxxxxx	359
Median Age: 18.4 Years	Total	2,269

Source: 1960 U.S. Census of Population

Between 1950 and 1960, the male-to-female ratio remained about even in almost all age groups

EDUCATION

The level of education for the population of Stokes at the time of the 1960 census stood at 7.7 median school years completed. This was lower than the rest of the comparison counties, well below the State's 8.9 median school years completed, and considerably below the 10.6 median school years completed for the United States as a whole. By way of comparison, it places Stokes just about ten years behind the rest of the State, since 7.9 median school years completed was the level attained by North Carolina in 1950. This is a matter for great concern, and one which the county government has already recognized to be of the highest priority for correction.

INCOME

The personal and family income level in the county is another area of prime concern. The Stokes County 1960 mean (average) income of $3,898 per family ranked very low compared with the rest of the comparison counties, the State, and the nation in the 1960 census.

If one sets a poverty level of $3,000, then 47% of the county's population was below the poverty level at the beginning of this decade, and 35% more was in the marginal $3,000-$6,000 class. Only 14% had incomes of $5,000-$10,000. The poverty level is a relative one, and there is no denying that a family's income goes farther in a rural area than in an urban

Table 3 Continuing Education in Stokes County

	1962-63	1963-64	1964-65	1965-66	1966-67
	1958-59*	1959-60*	1960-61*	1961-62*	1962-63*
Number of High School Graduates	251	212	308	291	271
Enrollment of Eighth Grade Four Years Preceding	431	370	525	478	466
Number & Per Cent of Graduates Entering College:					
Four Year College					
Number	35	39	56	67	61
Per Cent	13.9	18.4	18.2	23.0	22.5
Two-Year College or Its Equivalent					
Number	3	-	10	16	24
Per Cent	1.2	-	3.2	5.5	8.9
Number & Per Cent of Graduates Continuing Education or Training other than College					
Number	26	21	42	44	45
Per Cent	10.4	9.9	13.6	15.1	16.6
Number & Per Cent of Graduates Entering Military Service of Gainfully Employed					
Military:					
Number	11	4	5	8	6
Per Cent	4.4	1.9	1.6	2.8	2.2
Employed:					
Number	122	126	108	151	125
Per Cent	48.6	59.4	35.1	51.9	46.1
Number & Per Cent of Graduates Not Accounted for					
Number	54	22	87	5	10
Per Cent	21.5	10.4	28.3	1.7	3.7

*Year graduates were in eighth grade.

Source: Principal's Preliminary Reports, Follow-Up Survey North Carolina High School Graduates, and compilation by North Carolina Department of Public Instruction, Division of Research and Statistics center. (This, in part, is attributed to the rural family's raising vegetables, chickens, etc., for their own consumption.) However, it should be remembered that rural poverty is almost as ignored as urban poverty once was, and the Stokes figure is most damaging in its comparison to the other rural counties around it. (See income comparison data in Appendix.)

The North Carolina Department of Tax Research does give a somewhat more optimistic picture of the income situation with the use of slightly different figures. That agency records a rise in total personal income from $21,000,000 to $41,000,000 between 1959 and 1966, resulting in a near doubling of the per capita personal income from $961 to $1,743 during the same period. However, it should be pointed out that while there was probably some rise in real income, most of the increase is probably due to inflation -- to judge from the fact that the county's statewide personal income level fell from 56th to 58th during that time.

In pursuit of another, and perhaps more promising facet of income: if you measure it to indicate the standard of living to some degree, then it should be noted that mobile homes have probably raised the Stokes standard of living in recent years. Fourteen years ago, a ride through the county would be marked by the sight of many small, unpainted frame dwellings. These are now disappearing from the scene as young married couples and others of low and moderate income choose to live in mobile homes. Economically, they are better off making payments on something they will eventually own rather than making rent payments. This raises their standard of living, and it is raised still further by virtue of the high quality of home furnishings that come with the trailer. This trend has been conformed by the County Electrical Inspector who has reported mobile homes leading new home construction by 67 units to 42 units, respectively, during the period June to October, 1969. (The housing situation in the county will be discussed in full detail in the Land Potential Study, and Land Development Plan.)

CHARACTERISTICS OF THE LABOR FORCE

Agriculture is unquestionably the largest single source of employment at this time. The types of employment engaged in by county residents (also known as the "employment mix") are probably proportionately about the same now as they were in 1960.

One-third of the total employed 1960 population, and over half of those not engaged in agriculture, commuted outside the county to their jobs (see Appendix). For this reason, the county employment mix (Appendix) does not bear too close a relationship to the internal economic activities reported in the next section.

The ratio of insured unemployment has, since 1960, dropped from 24% to 10.4% in 1966. This matched the steady decline in the state and the national unemployment rate but was still far too high. Hopefully, the beginning of a promising trend saw the Stokes unemployment rate continue to drop in 1967 (9.1%), while the state and national rate began to rise again. This seemed to be reinforced by a 3% unemployment rate for the county during the first quarter of 1968; not a realistic figure to project on for the yearly rate, but at least encouraging in a time of the year usually noted for its high seasonal unemployment.

In 1960, at least (latest figures available) the percentage of women in the labor force (32%) did not vary a great deal from that of the comparison counties (32%-38%). The percentage of working mothers and married women was also the same (20%-25%).

The employment mix for the population has probably remained proportionately the same during that period.

Why the labor force should drop at a time when the population was increasing, and the unemployment rate as well as the estimated outmigration were supposedly decreasing, is a question hard to answer. These "facts" are difficult to reconcile, and may be a result of statistical delinquency on the part of the reporting agencies. If they are in fact true, educated guesses as to the reason might include (a) so many in the labor force in 1960 were chronically unemployable (witness the extremely high 24% unemployed then), that their unemployment benefit period simply ran out and they were dropped from the work force statistics; or (b) rising incomes in the county allowed some working wives to leave their jobs; and/or (c) the Vietnamese War siphoned off a significant number of unemployed or under-employed young males.

C. ECONOMIC ACTIVITIES

Stokes is still an agriculturally-based county, with retailing next in importance, followed by industry, wholesaling and services. As nearly as can be determined, the following is the situation in each activity. (Agricultural activity detailed in separate section of Land Potential Study).

Table 4 Economic Activities, Stokes County

	1963 Retail	1963 Service	1963 Wholesale	1963 Industrial	1964 Agriculture
Number of Establishments	185	78	6	24	2,716
Sales or Receipts	$9,577,000	$797,000	$1,782,000	(w)	$12,051,637
Number of Employees or Operators	n/a	n/a	34	1,042	2,716
Payroll	$ 525,000	$113,000	$ 112,000	(w)	--

(w) - withheld to avoid disclosure
n/a - not available

Source: U. S. Census of Business, and Census of Manufacturing

RETAILING ACTIVITY

Figures for 1963 show the number of retailing establishments up 14% (23) over 1958 -- at a time when the national number of establishments was falling; but it would seem that this retail strength is more apparent than real. In sales, food stores accounted for the most, with auto dealers and gasoline services second and third. This weakens the above picture of retail strength since most commercial outlets in the county are of the grocery and gasoline combination, and so far there is no competition to speak of from supermarkets. It should also be noted that the three types of retailers showing the highest sales increases are perhaps the ones most susceptible to the effects of inflation on their prices.

SERVICE-TRADES ACTIVITY

The number of establishments was up for the service trades (e.g., restaurants, motels, auto repair, etc.) in 1963, but was still expectedly low. Within that category, however, the number of personal service establishments (such as beauty shops, barber shops, etc.) had risen 443% (7 to 38) during the period. This figure more accurately reflects the national trend toward increased spending for services, the natural tendency to want services closer to home, and the rising income level in the county. The income level of the county is also reflected, negatively, in the fact that receipts for the service trades were up only 12% ($711,000 to $797,000) -- against an inflated national rise of 37%.

WHOLESALE ACTIVITY

Wholesaling was reported down 28% ($2,474,000 to $1,782,000) from 1950 to 1960 in sales, and one-third (from 9 to 6) in number of establishments. This is not surprising nor very alarming. The national trend is for consolidation of wholesaling into large firms located just inside the largest urban centers -- in this case Winston-Salem.

INDUSTRIAL ACTIVITY

Outside of the fact that the number of production workers more than doubled to 157% (348 to 895) between 1958 and 1963, against a national rate of 4.7%, the obsolete and incomplete manufacturing statistics tell us little about Stokes. Since there was actually a loss of one manufacturer during the reporting period, we can only assume that the industries already within the county were doing well enough to hire 613 new workers.

Of much more present significance, is the fact that at least three new industries with good growth potential have located in the southwestern part of the county during the last two years, including Carolina Medical Electronics (20 employees), Queen Manufacturing (71 employees), and International Aero Salvage (15 employees).

D. THE BASIS FOR FUTURE ECONOMIC GROWTH

FUTURE POPULATION

Planning Period Population Projection

Stokes County's population in the 1960 census had reached a level of 22,314, and as stated, the 1968 population has been estimated at 26,701 (on the basis of a field survey dwelling unit county, and a slightly reduced census figure of 3.75 persons-per-household). This indicates that during the last eight years the population growth rate has equalled 2.46% per year; probably as a result of the opening of US 52 to Winston-Salem in 1962, and growth of the Winston-Salem suburbs out toward Stokes.

A slightly reduced 2% population growth rate during the 1968-72 period can be projected to raise the 1972 population to 29,371. This considers that the growth rate during the first five years of the planning period will drop back, and then begin to increase again as projected economic activity increases.

Between 1973 and 1977, the inmigration of industry and homeowners should begin to hit its peak. A 2.5% growth rate during this period would result in a 1977 population of 33,071.

During the next five-year period of 1978-82, the growth rate should increase even more to 2.75% as industrial activity and homebuilding peak, and as recreation and tourism begin to fully develop. This should increase the 1982 population to a level of 37,586.

Recreation and tourism activities will probably continue to increase during the last five years of the planning period, but will not add significantly to the permanent resident population. The homebuilding boom should be past its peak, and industry in the county will presumably be expanding but not moving in. On the basis of these economic trend projections, the return to a 2% growth rate could be conservatively predicted, resulting in a 1988 population of 41,346 persons in Stokes County.

Anticipated Need for New Jobs

The need for new jobs is a relative thing in a rural county (as opposed to a growing urban area). In a central city ghetto, jobs are simply needed or people starve or go on Welfare. In Stokes County people have been able to choose the alternative of going out of the county to jobs because they own cars. At the same time, much of Stokes' growth potential comes from those who will move in to use it as a "bedroom community." This is part of its role in an urban-centered region.

Obviously, however, there is a need for new jobs in a geographical area with a mean family income only slightly above poverty level, and an unemployment rate three times the national-state average.

Under the circumstances then, no numerical estimate of new jobs during the planning period is going to be very accurate; however, if, to the "normal" number of persons entering the labor force during the planning period, one adds 50% of the number now commuting out of the county to jobs, an educated guess as to the number of veterans returning from duty in Vietnam, an employable estimate of the present unemployed, and an estimate of those released by the steady rate of agricultural decline, then as a very rough estimate the county could probably absorb 5,000 new jobs during the length of the planning period (1968-1988).

THE FUTURE LABOR FORCE

The labor force in Stokes County should increase, especially if there are opportunities to hold young people in the county. Put another way, the supply of labor for economic expansion should be adequate and of satisfactory training, to judge from the number of outcommuters who would (according to informal interviews) rather work close to home. This, in all probability, would be made even better if more low-income and moderate-income housing were available.

Outcommuting itself will continue and will not be overcome even by a surplus of job opportunities in the county. This is because of the influence of the Winston-Salem urban center, and the county's residential role in it.

The high percentage of employment in agriculture is bound to change -- regardless of how agriculture fares as an economic activity. It will predominate, perhaps, throughout the planning period, but it will also show a steady decline in numbers. This would seem to be an irreversible national trend, and as elderly farmers in the county die, more farms will be abandoned and more young people leave. Even if more modern agricultural methods take hold, they are so automated that they require far less people than even the small family farm.

According to the North Carolina Employment Security Commission, the number of high school graduates entering the labor market averaged about 70% of those finishing high school between 1961-64. Then, by 1965-66, the rate had dropped to 50%. This should remain about the same, as the number continuing their education increases along with the population, although an end to the Vietnamese War draft may for a short time increase the percentage again. At the same time, according to minimum population projections, about 5,344 persons should reach marriageable age during the planning period.

Since the per cent of those completing high school will increase during the planning period, the current 50% entrants to the labor market from high school would seem to be a likely figure to work with: this computed to an estimate of at least 2,670 entering the labor market during the planning period.

As to the occupational potential of the unemployed and underemployed, the Employment Security Commission seems to set the retrainable number at about 10% of the employables in the county. This may be too conservative, but weighing against retraining of the underemployed and unemployed -- at least on paper -- is the low level of educational attainment within the county. This is especially true at a time when the requirements for technological skill is rising with most employers.

E. LIKELY FUTURE ECONOMIC GROWTH TRENDS

By way of introduction, it should be stated that in projecting economic growth, certain assumptions have to be made. In the case of Stokes County, we have assumed that: (1) present trends within the county will continue; (2) advantage will be taken of the county's opportunities and resources; (3) that the national trends which so influence those opportunities will continue in the same direction.

As was stated by John Grey Associates in their recent Comprehensive Water and Sewer Study, the southern half of Stokes County probably has the most growth potential because of favorable topography, proximity to the Winston-Salem urban center, access (US 52, 8 and 311, plus the railroads and Smith Reynolds Airport in Winston-Salem), the new Walnut Cove sewer system, the new King water system, and efforts to gain industry by both towns. We might add to this as factors, the establishment of the new Pilot Mountain Park just across the border from the southwestern section, in Surry County, Stone Mountain Park in Wilkes County, and the New River Reservoir Project in Ashe and Allegheny Counties.

This does not, however, mean that the growth potential of the northern part of Stokes County should be underestimated. That area has factors to its credit including the unspoiled character of the landscape; its present energetic development efforts; a partially trained labor force now commuting to jobs in Rockingham County; recreation, tourism, and special housing opportunities. (See Land Development Plan.)

There seems to be no lack of availability of financing for new and expanding economic activities in the county. So far the Northwestern Bank has taken an unusually high interest in economic expansion; and in addition, the county's King and Foothills private development corporations have begun to function comparatively well. There are also other sources that can be tapped, such as Business Development Corporation, and the Community Development Corps. The Northwest Economic Development Commission has so far rendered extensive service by coordination of development efforts.

Within the individual categories of economic activity, it is felt that these will be the dominant growth trends:

Agriculture. Agricultural activity will remain dominant for many years -- possibly throughout the length of the planning period. However, marginal farms are becoming ever less profitable and being abandoned, while at the same time mechanized farming and modern animal husbandry methods have not yet taken hold. Since the topography of the county does not lend itself particularly well to mechanized farming, the only foreseeable reversal of the trend would be a large scale increase in modern-technique livestock raising.

Retailing. The retailing trend in Stokes is a complex one for analysis. Retailing will probably continue to grow, both in sales (and to a lesser degree the number of establishments) as the nation's economy grows. At the same time, the number of "Mom and Pop" food stores cannot profitably grow much more, even though few will probably close permanently because of their appeal to local residents. This would indicate that the number of retail failures could go up without significantly affecting the number of establishments.

The retail growth trend in general should progress in something like this manner:

1. Retail sales and outlets should increase slowly as new homeowners come into the county.

2. Tourism and recreation should also ten to increase retail activity, but this will in all likelihood be seasonal in character.

3. Neighborhood shopping centers will open in areas previously serviced by combination gas stations and groceries.

4. The opening of a neighborhood shopping center, along with the national trend to do all but everyday shopping at regional centers, will tend to slow the growth of the number of retail outlets in a given area, but will probably cause an increase in retail sales in an area over a period of time.

5. This projection depends heavily on the degree of accessibility that is attained. If no road improvements are made within the county, then it seems unlikely that there would be a significant increase in retail activity except in the southwest and southeast portions.

Sites for commercial expansion within the county are numerous, but it has been observed that highway commercial sites are being rapidly used up by enterprises not in the "highest and best use" tradition, such as junk yards. These sites should be protected and reserved to serve developing neighborhoods in accord with overall trends. Zoning is one method whereby this can be accomplished.

Service Trades. Service activity should continue to grow along with the national trend, limited only by income level of the county. As residents move into the county (permanently or as vacationers) service income should, naturally, increase even faster. Of course, this implies the same crucial nature of the accessibility factor as was indicated for retail activity.

It should be noted in connection with service activity trends, that the new Pilot Mountain Park and the visibly increased traffic on US 52 offer opportunities for establishment of one or more motels or other highway-oriented facilities. Here again, compatible development trends must be maintained.

Wholesaling. The trend in wholesaling will be a continued decline, and, with the exception of building supplies, may disappear from the county's roster of economic activities before the end of the planning period. The only thing to reverse the trend would be the possible location of some large mechanized wholesaling activity within the county as a result of the growth of the Winston-Salem urban area out to Stokes.

Industrial. There is every reason to believe that future prospects for industrial growth are favorable now and will become even more favorable when better access, education and public facilities are provided. An available labor force exists now in the southern and northeastern sections of the county and the Employment Security Commission indicates an "ample supply" of workers living within a 15-25 mile commuting radius of the county center -- Danbury. This takes into consideration the labor force not only of the surrounding counties and the northern portion of the urban center, but also of the bordering southern portion of Virginia.

Thus, it even more behooves Stokes County to make an attractive place for decentralizing industry to locate, regardless of the labor force actually resident inside the county boundaries. This translates to better prospects for growth as access is improved to the southeast and central portions, and as public facilities such as water and sewer are extended.

Few, if any, available industrial buildings exist in Stokes, and there is no unified list of available sites for industry. However, there seems to be a number of "adequate" sites according to the Division of Commerce and Industry (Department of Conservation and Development) and the Northwest Economic Development Commission (see Land Development Plan). In one of the more recent efforts to attract a sizable industry, the fledgling Foothills Development Corporation was able to take option on 15 different sites for consideration by the prospect.

New Opportunity Areas. If the opportunities of the future are taken advantage of, and an effort made to implement plans for them, comparatively large development should take place in: recreation, tourism, construction, professional services, and education.

F. CONCLUSION

There is no doubt that Stokes will grow; the questions are, How and By How Much?

The natural trend of urbanization pushing into the county can be cut short long before it reaches its full potential if the development is haphazard and public facilities are not provided to support the new population and economic activity. Extensive research (by the Syracuse University Metropolitan Finance Center) has shown that the greatest single factor in the attraction of industry (after the industry has chosen to locate in a geographical region and given equal community services such as water, sewer, etc.) is education.

The central and northern portions of the county will remain isolated and underdeveloped unless better access is provided and unless their unique character is translated into development.

It should be apparent that not only is Stokes County not an isolated entity in itself, but that the role it has to play as part of a metropolitan region, in a particular section of the nation, will ultimately decide the future for it. This role must be actively understood and allowed to influence decisions of the future.

Nearly all of what will eventually be accomplished in the planning and development of Stokes County will be done by the efforts and leadership of its own people. The county must therefore be constantly ready to take advantage of new growth opportunities and ideas.

G. GOALS FOR THE FUTURE

1. Growth must be guided intelligently. In the most rapidly developing areas zoning should be adopted. Throughout the county, subdivision regulations should be adopted and enforced.

2. In order to provide for its present residents and to realize its full growth potential, new and diversified industry and commercial enterprises must be attracted to provide jobs and to finance public improvements in the county. This must be done by using all the resources provided by the State of North Carolina and the Northwest Economic Development Commission, as well as the full coordinated energies of the county's private development corporations.

3. Improvement of education in the county must become a primary goal. Movement in this direction has already taken place, and it is the county's responsibility not to let efforts lapse at the elementary and secondary levels through temporary financial difficulties.

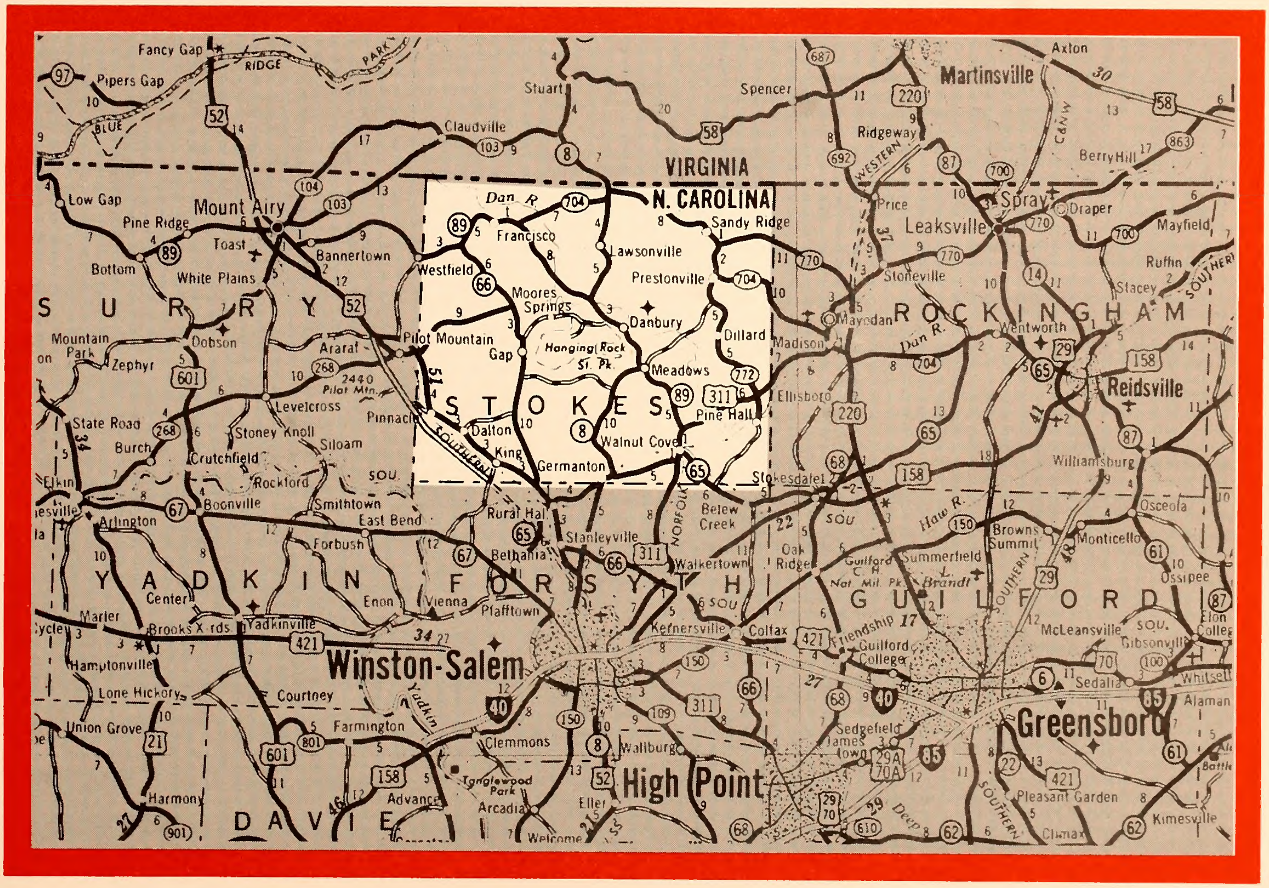
4. Improvement of the county's pattern of access and circulation must become an actively sought after goal. Toward this end, the adoption and implementation of a thoroughfare plan must become an initial county objective.

5. Encouragement of citizen efforts toward community economic development, and the provision of improved community facilities through non-profit corporations, must be constantly encouraged and guided by the county itself. A conscious objective should be to guard against the withering of public enthusiasm as a result of temporary setbacks (or even through comparatively large successes), close press liaison, and coordination with interested groups. Other objectives might include the coordination of existing area development organizations, and the active encouragement and support of such development-related groups as the new Stokes County Historical Society.

6. In addition to the orderly and staged provision of physical public improvements and community facilities, it should be a goal to realize the fullest possible development of Stokes' human resources as well. Initial objectives could include the designation of areas such as public housing, social services, environmental pollution control, community beautification, etc., as fields of action during the implementation phase of planning activities.

7. The understanding of planning by the citizens of Stokes County must be actively fostered by the county itself so that there will be formed in the minds of the people a desire for the orderly, harmonious development of those areas uniquely suited, by their present unspoiled character, to the opportunities of the future.

8. The county should become increasingly active on the regional planning level, so that future benefits can be realized from cooperation with neighboring governmental units and from the opportunities of planned regional development.



LAND POTENTIAL STUDY

II. LAND POTENTIAL STUDY

The general emphasis in this study will be on existing factors in Stokes County's development, while the Land Development Plan will be concerned mainly with recommendations for future development.

H. NATURAL FEATURES

TOPOGRAPHY AND DRAINAGE

The most salient feature of Stokes County topography is the Sauratown Mountain Range, named for the Indian tribe originally occupying the territory. Eleven miles in total length, and ranging from one to three miles in width, it rises to a maximum elevation of 2600 feet, and occupies the west central portion of the county.

As a result of this blocking position, the Sauratowns have tended to split the life and economy of the county, and at times even threatened to split it politically. North-south transportation routes to and from the Piedmont Crescent have bypassed all but the southeast and southwest corners of Stokes. Development has followed these transportation lines of activity, leaving the northern portion of the county underdeveloped and underserviced (with regard to future development capability).

At the same time, the Sauratown Range, its streams, and its forest cover do supply an important element in the future recreation development potential, just as it has in the past when Stokes was known for its resort springs hotels.

For the remainder of the county, hilly terrain is common to all but the southeastern and southwestern areas. Steep lands occur in many places near the Dan River and near most creeks in the central and southern sections. There are rather wide, smooth ridge areas in the northern part of the county near Francisco, Oak Ridge, Sandy Ridge, and on an interstream divide extending southeastward from Sandy Ridge to the Rockingham County line. Other areas of smooth relief are in the northwestern quadrant to the north and south of NC 268, extending westward almost to the Surry County line; around Meadow; and to the south and southeast of Walnut Cove. A more gently rolling relief is developed in Yadkin Township, and extends in a pattern of broad ridges south across the Forsyth County line.

The Dan River flows diagonally across Stokes County from the northwest, and more than 80% of the county's drainage water joins in. About 45 square miles in the southwestern quadrant are drained by the Little Yadkin River and its tributaries. Another area of approximately 45 square miles in the northeastern corner drains northward into Virginia and eastward into Rockingham County. The North Carolina Department of Water and Air Resources describes the drainage system as "intricate", with creeks, branches, and intermittent drainageways ramifying into all parts of the watersheds, providing ample drainage nearly everywhere. Each farm is located on at least one drainage outlet, and the pattern is so complete that there are very few natural ponds or lakes in the county. The streams are swift flowing, and in the past have been used to power roller grist mills and sawmills. Many opportunities exist for construction of artificial recreation lakes.

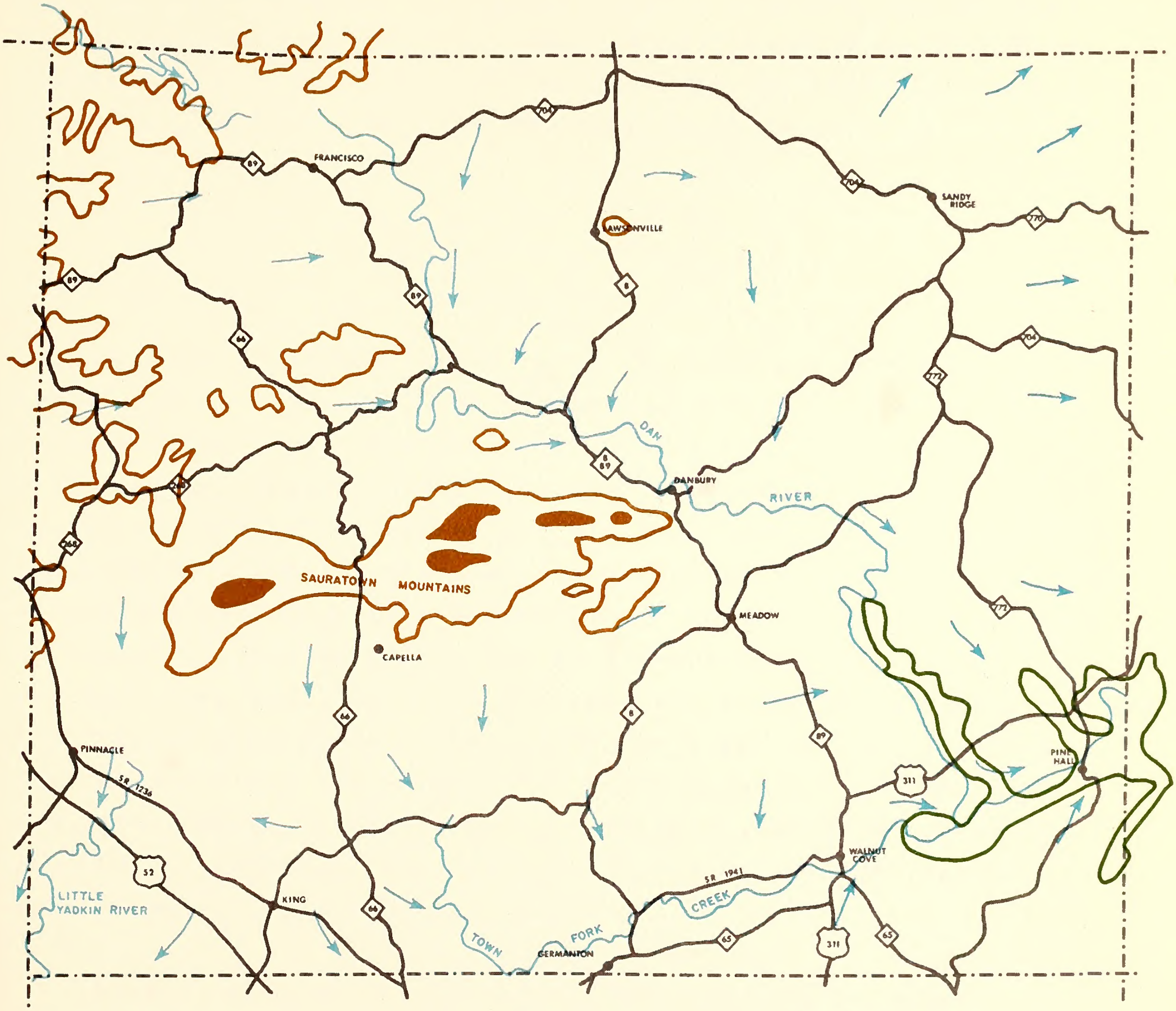
The lowest topographic elevations occur in the Town Fork Creek and Dan River Valleys, toward the southeastern corner of

STOKES COUNTY
NORTH CAROLINA

0 1 2
SCALE IN MILES

N

GENERALIZED
Topography & Drainage



LEGEND

HIGHER ELEVATIONS

— 1200 FT. CONTOUR LINES

● PEAKS ABOVE 2000 FEET

LOWER ELEVATIONS

— 600 FT. CONTOUR AND BELOW

DRAINAGE

— RIVERS AND CREEKS

← DRAINAGE PATTERN

MAP-2

the county. The 600-feet above sea level elevation in these low places forms the bottom of the county's total 2,000 foot variation in topographic elevation (the maximum being 2600 feet in the Sauratown Mountains). Small areas of swamp occur throughout the county, but it is in these low valleys that there has been the greatest chance for flooding in the past.

CLIMATIC DATA

Weather in Stokes County, with the possible exception of the mountains themselves, is generally similar to that of the Winston-Salem area. The State Climatologist for the U.S. Environmental Services Administration reports: "Our only records of weather in Stokes are of short duration. They seem to indicate a similar maximum temperature at Danbury as that at Winston-Salem, but a considerably lower (6 to 8 degrees) minimum at Danbury. This is likely due to a combination of circumstances; more rural location and cold air drainage into Danbury from higher elevations to the north. In adapting Winston-Salem figures for Stokes in general, we would suggest lowering minimum temperatures by five degrees. Rainfall, although it varies greatly in individual occurrences, should average out reasonably closely in the two counties."

Stokes' winters are normally short, lasting December through March as a rule, but not necessarily mild. Temperatures rise into the 40's or 50's during the day, but drop sharply at night to below freezing on more than two-thirds of the winter dates, according to ESA. The monthly mean temperature ranges between 35-45°F during December, January and February. Snowfall has averaged about nine inches per year from 1929 to 1964, but has ranged from less than one inch total in seven of those years to a seasonal record total of 33 inches in 1959 to 1960.

Summer rainfall generally comes in the form of thundershowers, and it is the degree of thundershower activity that determines the summer temperature highs. During June, July and August, monthly mean temperatures are approximately 75°F, with extreme highs of 95° and lows of about 50°. Year around the temperature is sufficiently mild for growing of cover crops and some vegetables.

Rainfall is well distributed throughout the year, and is ample for the crops grown. The mean annual rainfall is 46.69 inches, the heaviest rainfall occurring in the Spring and Summer and the lightest in the Fall. The comparatively dry months are favorable to the harvesting of crops.

Prevailing winds are from the northwest and west.

Climate can be a definite development potential asset, and both the northern and southern portion of the county would seem to be attractive for the site of retirement communities. Stokes' climate plays two roles in this: (1), the short, less severe winter -- but still definitely winter -- is gradually becoming more attractive to a significant number of retiring couples from the colder regions of the nation; (2) while this mild winter situation is common to most of North Carolina, including the western mountains, the Blue Ridge Mountains to the north protect Stokes County to produce an even milder and more acceptable situation.

I. NATURAL RESOURCES

Discussion of Stokes' primary resource, its people, has already taken place in the Economic Potential Study. In that report some very general suggestions were made for development of the county's people, and more detailed recommendations will be made in the Land Development Plan, the Community Facilities Study, and the Improvements Program. This Land Potential Study will examine the other natural resources of Stokes, including open space, mineral resources, soil, water and air.

OPEN SPACE

As North Carolina becomes more urbanized, open space becomes a precious natural resource. Too much open space is sometimes the sign of lack of development (i.e., unless income is being derived from it). On the other hand, open space is also an asset for future development if it is both protected and utilized properly.

Stokes is no different from most rural counties of the Piedmont in having a proportionately large amount of open space. There are characteristics of Stokes' open space situation, however, that lend it more potential for future development than some of the other counties may possess. This uniqness is a combination of factors, including:

-- The characteristics of the county's topography combined with its forest cover in the central and northern portions;

-- Its geographical location in an urbanizing region needing both recreation and expansion room; and

-- The variety of its presently underdeveloped land making it suitable for residential, industrial, agricultural, recreational and tourism uses in various locations.

The most important single characteristic of its open space is that "it has trees". Its forests have their good and bad points, but the county has by no means been largely cleared for agricultural use. About 60% of the total land area remains woodland. An estimated 179,000 acres of commercial forest exist, with a productive reserve of about 4,000 acres. Almost two-thirds of the timber is hardwood.

The economic feasibility of future growth for timber is somewhat in question because of rising land prices, but this is partially offset by the demand for hardwoods by the North Carolina furniture industry and the growth potential of the Christmas tree industry in this state. More reforestation has taken place in the southern portion of the county than in the north (primarily as a result of the watershed projects) (see Soils Section). Since 1960 one-million trees have been planted in watersheds. The need for reforestation is one of the reasons why a watershed project is needed in northern Stokes.

A fire tower is maintained and staffed almost year-round on Sauratown Mountain. So far there have been no serious fires to damage the forest resources.

Wildlife protection in Stokes County is most stringent for the deer population and the trout streams in the northwest quadrant. The deer population is now high, and the numbers of squirrel and rabbit are showing marked improvements. Some raccoons and oppossums can be found throughout the county, and in the more isolated sections a few bears are still seen.

The character of the land and the tourism potential would seem to suggest development of both wildlife preserve and hunting preserves as feasible land uses for the northern and central portions of the county.

MINERAL RESOURCES

At one time, iron ore was the most important mineral resource of Stokes County. However, open pit mining in the midwest areas of the nation ended iron's economic important in Stokes -- even though there is still a large quantity of high grade ore in the county according to the Division of Mineral Resources, North Carolina Department of Conservation and Development. Costs of underground mining just cannot compete with the more economic open pits.

At present the following mineral materials are being mined:

Sand -- State Highway Department; mostly Dan River bottom and banks.

Gravel and Crushed Stone -- private producers.

Clay -- Pine Hall Brick and Pipe Co., Inc.; southeast quadrant.

Building Stone -- Vaden's Quarry, Danbury.

Itacolumnite, or flexible sand stone, has been quarried intermittently on a small scale near Gap, and sold as mineral collectors' specimens. Thin, long pieces of the stone are easily flexed by hand (probably due to its micaceous cement) making it an oddity of scientific and non-scientific interest.

Mineral products production will never be a major item of the county's economy, but some future development potential does lie in the mineral resources area.

The building stone (mostly blue-gray but also some distinctive light pink and red) now being taken from Vaden's Quarry is reported to be of high quality and extensive quantity at this site. This report, by the firm that has leased the quarry, together with the similarity of samples picked up around the base of the Sauratown range to the mined products at Vaden's, raises the distinct possibility of other economically valuable deposits in the area.

The Soil Science Department of North Carolina State University estimates an annual need for 2.7 million tons of agricultural lime each year to neutralize acid soil conditions in the state. Liming is necessary for the production of tobacco, cotton, and soy beans with the importance of this being stressed recently by agricultural authorities in an intensive publicity campaign. At present, lime must be brought in from Virginia and Tennessee at a cost to North Carolina farmers in the neighborhood of $12 per ton. Since much of this involves shipping charges, local sources of lime reduce the cost to the farmer by as much as 50%. Since lime stone was once mined in northern Stokes in conjunction with the several Nineteenth Century iron foundries, the possibility of commercially valuable deposits in the county should be investigated carefully.

In terms of overall land potential, the extraction of mineral resources from any area has its inherent dangers as well as benefits. With existing mineral extraction operations, care should be taken to avoid soil erosion at worked-out sites, and the excessive run-off of waste materials that could pollute or clog streams and the watertable. In the future, care should be taken to avoid surface stripping of large areas with recreation potential (especially in the Sauratown foothills) if more extensive building stone deposits are discovered.

SOILS

The comprehensive water and sewerage report completed by John C. Grey Associates last year makes these general observations concerning soil types which concur with the U.S. Soil Conservation Service Survey completed in 1959 (Table 5 and Map 3):

1. About 80% of the soils in Stokes County fall into categories which would be permeable and which would drain well. Assuming that the area being developed had lots of adequate size, septic tank construction should be satisfactory.

2. The soils that would not be particularly suitable for septic tanks and tile fields, such as the heavy clay loams, occur primarily in the stream bottoms which would not normally be used for this type of construction.

3. With the exception of the clay loams in the river bottoms, the ability of the soils shown to support engineering structures such as water plant construction and overhead tanks, would vary from good to excellent. The soils in the stream bottoms would be adequate for lighter construction such as sewage lagoons.

4. The presence of rock would very materially affect the cost of any engineering construction. In Stokes County rock would vary from exposed outcropping near the center of the county to depths in the magnitude of 33 to 35 feet in the southern portion. Normally, there exists about 30 to 40 inches of clay subsoil over sandstone or other rock formations.

5. In most areas the water table is well below septic tank and tile fields depths.

SOIL INTERPRETATIONS - GENERAL SOIL MAP

STOKES COUNTY, NORTH CAROLINA

			LIMITATIONS FOR								
			Dwellings with		Recreation					Suitability for	
SOIL ASSOCIATIONS	SOILS IN THE ASSN	% IN ASSN	Sewerage Systems	Septic Tank Filter Fields	Camp Sites	Picnic Areas	Intensive Play Areas	Light Industries[1]	Roads and Streets[2]	General Agriculture	Woods
1. PACOLET-WILKES (43% of County)	Pacolet Wilkes	65 20	Slight Sev	Mod (P) Sev (R,SS,P)	Slight Mod (T)	Slight Mod (T)	Slt-Mod Sev-Mod(T)	Mod (SS) Sev (SS)	Mod (TSC) Sev (TSC)	Good Poor	Good Fair
2. MAYODAN-WADESBORO-GRANVILLE (4% of County)	Mayodan Wadesboro Granville	45 35 10	Slight Slight Slight	Mod(P) Mod (P) Slight	Slight Slight Slight	Slight Slight Slight	Slight Slight Slight	Mod (SS) Mod (SS) Mod (SS)	Mod (TSC) Mod (TSC) Mod (TSC)	Good Good Good	Good Good Good
3. PACOLET-CECIL-APPLING (32% of County)	Pacolet Cecil Appling	45 35 10	Slight Slight Slight	Mod (P) Mod (P) Mod (P)	Slight Slight Slight	Slight Slight Slight	Slt-Mod Slt-Mod Slight	Mod (SS) Mod (SS) Mod (SS)	Mod (TSC) Mod (TSC) Mod (TSC)	Good Good Good	Good Good Good
4. HARTSELLS-PACOLET (3% of County)	Hartsells Pacolet	60 30	Slight Slight	Mod (P) Mod (P)	Slight Slight	Slight Slight	Slt-Mod Slt-Mod	Mod (SS) Mod (SS)	Mod (TSC) Mod (TSC)	Good Good	Good Good
5. MAYODAN-BUCKS-PENN (6% of County)	Mayodan Bucks Penn	35 25 20	Slight Slight Mod (R)	Mod (P) Slight Sev (R)	Slight Mod (T) Slight	Slight Mod (T) Slight	Slight Mod (T) Sev (R)	Mod (SS) Mod (SS) Mod (R)	Mod (TSC) Sev (TSC) Mod (R)	Good Good Good	Good Good Good
6. MADISON-PACOLET (4% of County)	Madison Pacolet	45 40	Slight Slight	Mod (P) Mod (P)	Slight Slight	Slight Slight	Slt-Mod Slt-Mod	Mod (SS) Mod (SS)	Mod (TSC) Mod (TSC)	Good Good	Good Good
7. LLOYD-CECIL (3% of County	Lloyd Cecil	55 35	Slight Slight	Mod (P) Mod (P)	Slight Slight	Slight Slight	Slight Slt-Mod	Mod (SS) Mod (SS)	Mod (TSC) Mod (TSC)	Good Good	Good Good
8. STONY LAND (3% of County)	Stony Land	80	Sev (R)	Sev (R)	Sev (R)	Mod (R)	Sev (R)	Sev (R)	Sev (R)	Poor	Fair
9. CHEWACLA-CONGAREE (2% of County)	Chewacla Congaree	45 35	Sev (Fl) Sev (Fl,Wt)	Sev (Fl) Sev (FL,Wt)	Sev (Fl) Sev (Fl,Wt)	Mod (Fl) Sev (Fl,Wt)	Sev (Fl) Sev (Fl,Wt)	Sev (Fl) Sev (Fl,Wt)	Sev (Fl) Sev (Fl,Wt)	Fair Fair	Good Good
			Slopes >10% impose limitations; 10-25% - Mod.; 25%+ - Sev.	Slopes >10% impose limitations; 10-15% - Mod.; 15%+ - Sev.	Slopes > 6% impose limitations; 6-10% - Mod.; 10%+ - Sev.	Slopes >10% impose limitations; 10-25% - Mod.; 25%+ - Sev.	Slopes > 6% impose limitations; 6-10% - Mod.; 10%+ - Sev.	Slopes > 10% impose sev. limitations	Slopes > 25% impose sev. limitations		

Abbreviations for Limiting Factors:

Fl - Flood Hazard
Wt - Water Table
T - Trafficability
SS - Shrink-swell Potential
R - Rock
P - Percolation rate
TSC - Traffic supporting capacity

Abbreviations for degree of limitations:

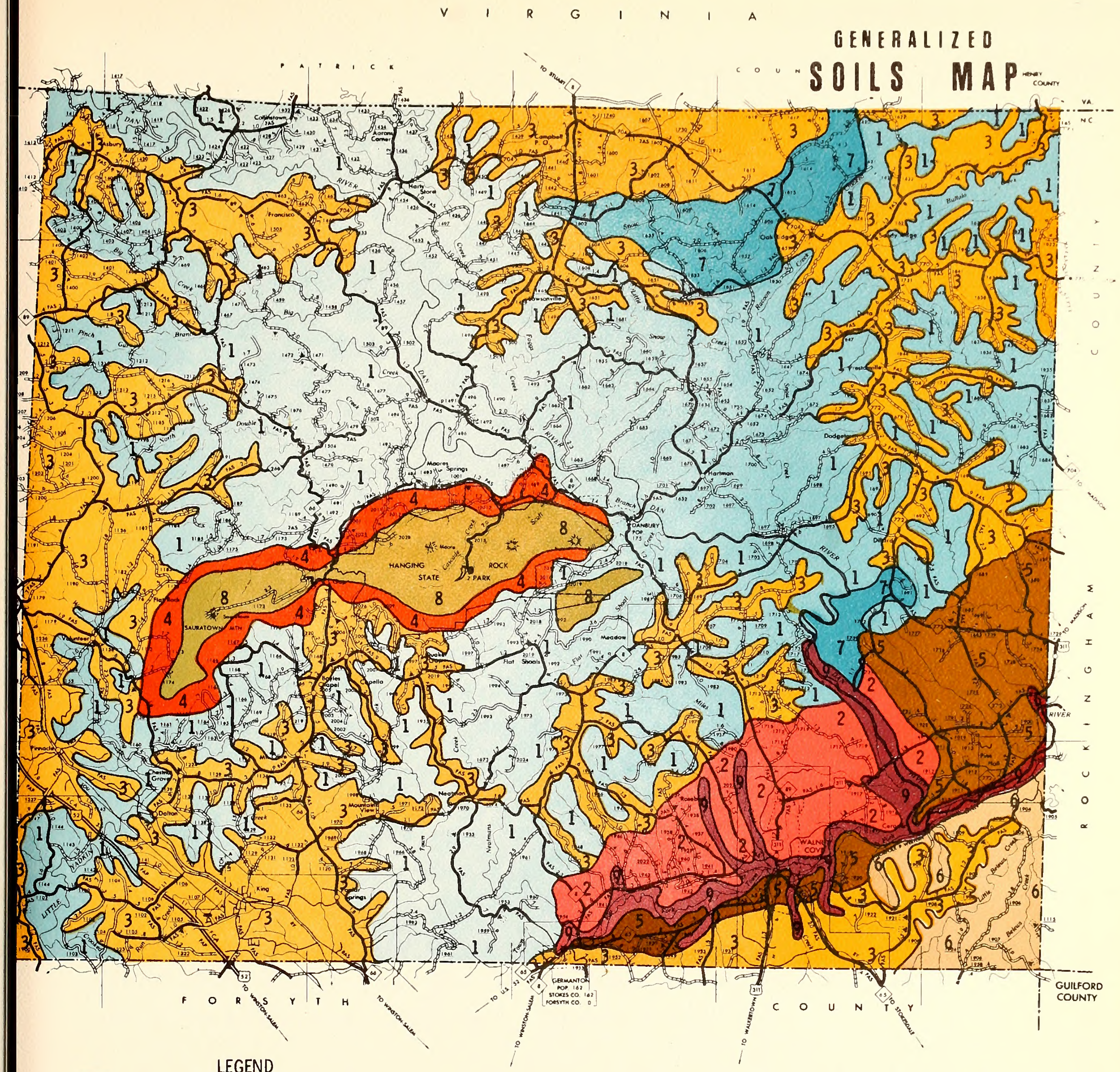
Slt. - Slight
Mod. - Moderate
Sev. - Severe

1/ Structures whose footings are in subsoil.

2/ Refers to roads and streets that have subsoil for base.

Prepared by the Soil Conservation Service
assisting the Stokes Soil and Water
Conservation District

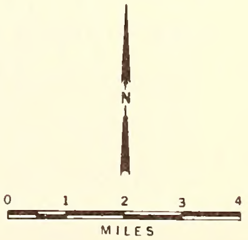
GENERALIZED SOILS MAP



LEGEND

- 1 PACOLET-WILKES ASSOCIATION
- 2 MAYODAN-WADESBORO-GRANVILLE ASSOCIATION
- 3 PACOLET-CECIL-APPLING ASSOCIATION
- 4 HARTSELLS-PACOLET ASSOCIATION
- 5 MAYODAN-BUCKS-PENN ASSOCIATION 1/
- 6 MADISON-PACOLET ASSOCIATION
- 7 LLOYD-CECIL ASSOCIATION
- 8 STONY LAND
- 9 CHEWACLA-CONGAREE ASSOCIATION

1/ The Bucks and Penn series used in this association are confined to cooler climates; similar series for such soils will be developed at a later date.



Approximate Scale

STOKES COUNTY
NORTH CAROLINA
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
RALEIGH, NORTH CAROLINA

This General Soil Map is suitable for broad planning purposes only. For more detailed planning on individual tracts of land, a detailed soil survey is needed.

MAP-3

The Soil Conservation Agent, commenting further about general soil conditions, cautions that while permeability is generally good for septic tanks throughout the county, there are enough small, scattered pockets of soil not suited for this purposes to be troublesome. Any perspective builder should run a soil check before locating a structure or septic tank.

For agricultural use, the soils have proved adequate except where rock outcrops or is too close to the surface, as mentioned. Not to be minimized, these conditions occur in the central and north-central sections.

With regard to soil conservation, there are at present two watershed projects active in Stokes County: The Little Yadkin Project in the west-central and southwest portion of the county, and the Town Fork Creek Project in the south-central and southeastern sections. Between these two projects work is now underway for soil conservation in two-thirds of the county's watershed area where such conservation is considered feasible. Three dams will be completed under the Little Yadkin Project, with a high emphasis being placed on erosion prevention grading and planting. In the Town Fork Creek Project, seven small dams are scheduled for Stokes County, of which three already have been constructed.

Road bank erosion has been greatly reduced by plantings in the last few years, but undercutting is beginning to take place on banks throughout the county and more backgrading is needed. It would seem that the Highway Commission has now begun to backgrade as a matter of policy on new or improved roads, at least through rougher terrain.

The Watershed Forester has indicated that reforestation of unused agricultural land would help soil conservation. It is for this reason that he is interested in seeing a third watershed project started in northern Stokes County along the Dan River and its tributaries.

WATER RESOURCES

Water resource inventories and supply recommendations are presented in detail by the recently completed Comprehensive Water and Sewerage Planning Report. This study will not try to duplicate the work already available for examination in the Grey Report, but in general summary it shows:

1. A much more than adequate supply of ground water and surface water for the county's foreseeable future.
2. Although of generally adequate supply, ground water (1) varies widely in mineral content (so much so as to be sometimes undrinkable in the Sauratown foothills); (2) proved to be of unreliable supply in many sections during last summer's severe drought; and (3) is generally uneconomical to obtain (even though it is possible to drill wells with capacity of as much as 100 gallons per minute in Danbury, and 150 gallons a minute in Walnut Cove).

In order to insure future growth capacity, the Grey Report concludes, the county should plan toward utilization of surface water supplies. Increased population inevitably leads to increased pollution of ground water supplies, and increased industry usually requires higher quality water (lower mineral content) than ground water supplies can be relied upon to supply.

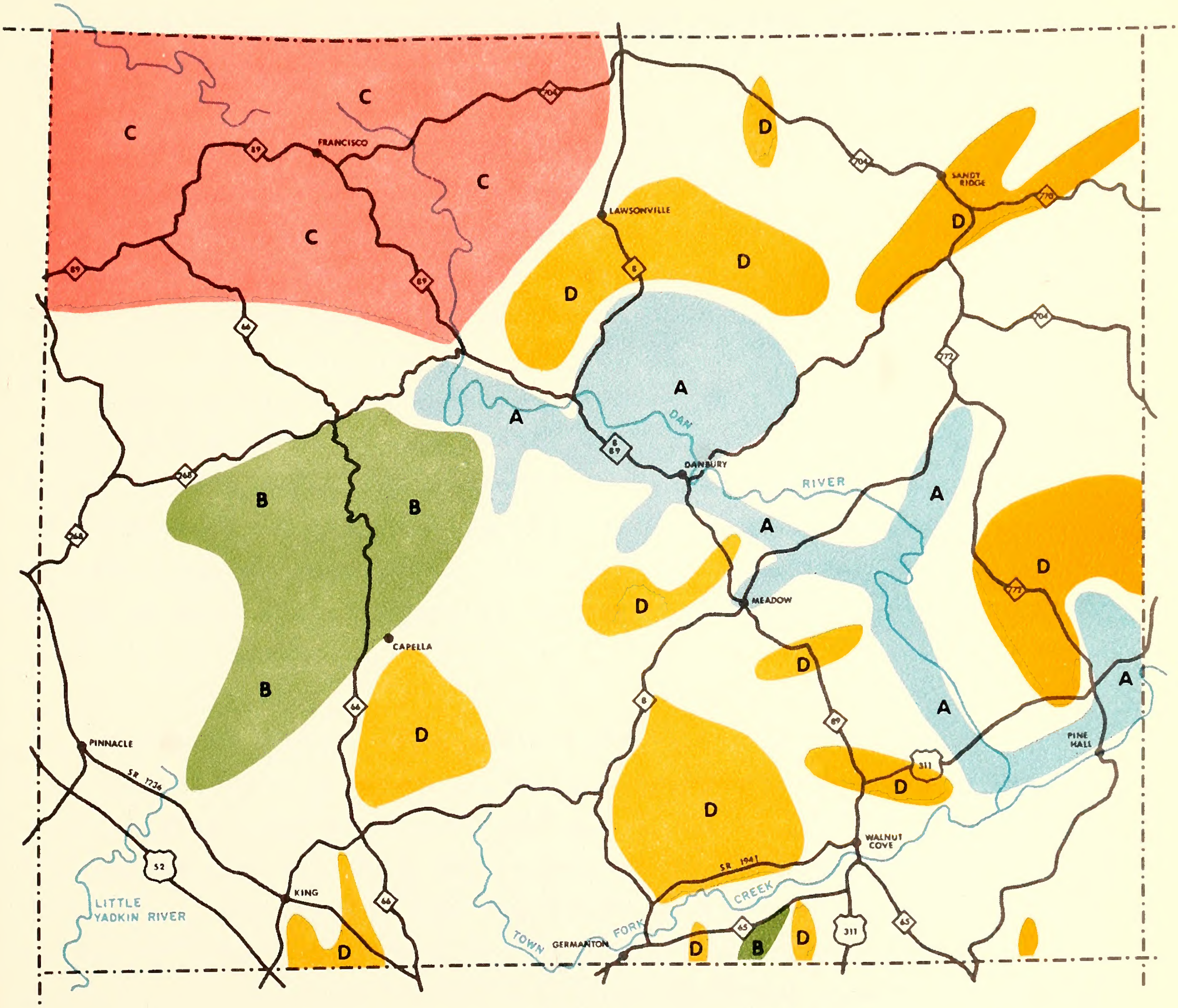
The two best sources of surface water are the Yadkin River, and Dan River in the Roanoke River Basin.

STOKES COUNTY
NORTH CAROLINA

WATER CLASSIFICATIONS

0 1 2
SCALE IN MILES

N



LEGEND

A TREATED DRINKING WATER SOURCE

B RECREATIONAL USES

C TROUT (SPECIAL TROUT STREAM PROTECTION)

D (AGRICULTURAL, INDUSTRIAL COOLING, AND OTHER USES REQUIRING LOWER QUALITY)

NOTE.
REMAINDER OF COUNTY CLASSIFIED "C" (FISHING).

(SOURCE: N.C. DEPARTMENT OF WATER AND AIR RESOURCES.)

MAP-4

The King District Water System is already supplying most of Yadkin Township and the northwest portion of Forsyth County from the Yadkin River. The water is of excellent quality with a minimum 60-year flow ranging from 225 to 290 million gallons per day (mgd).

The Dan River is also an excellent source of supply for the county, especially since legal restrictions prohibit taking from one river basin to another. The Dan maintains a minimum flow of 16.8 to 23.2 mgd. (By comparison, Winston-Salem takes approximately 12 mgd from the Yarkin River at present.)

The Dan River was surveyed as part of the Roanoke River Basin by the Corps of Engineers in 1943 for flood control purposes. Three dam sites proposed in an earlier 1934 Corps study were retained in the 1943 survey, but were not recommended for construction at that time. The Grey Report states that the Dan would be adequate as a source of supply even without construction of the dams.

Although now of reasonable purity, the surface water classifications assigned to the Dan's tributaries by the Department of Water and Air Resources are probably not high enough to adequately protect this future source of drinking water. The Grey Report recommends the upgrading of these tributaries from Class "C" (fishing) and Class "C Trout Water" (special trout protection), to Class "A II" (treated drinking water source).

It should also be noted that in order to properly protect and utilize the recreation potential of the area, too many of the county's streams are classed "C" for fishing instead of "B" for recreational uses. The Chief of the Stream Monitering Division of the Department of Water and Air Resources advises that there would probably be no objection to these changes. He also reports that at thie time there are no industries in the using unusually large quantities of water.

With increased population and land utilization, water pollution is on the verge of becoming a major problem. The Town of Walnut Cove presently discharges some treated and some untreated wastes into Town Fork Creek, as does the London Consolidated School three miles to the west. However, Walnut Cove has received a Federal grant to aid in the construction of adequate waste treatment facilities, and construction is underway.

The only two industrial waste discharges are from the United Elastic Company, near Francisco, and the R. J. Reynolds Tobacco Co., Brook Cove plant. The waste from United Elastic is treated by means of a mechanically aerated industrial waste lagoon, discharging the effluent into the Dan River. The R.J. Reynolds plant is provided with a secondary-waste type treatment facility (with chlorination) discharging the effluent into Sandy Branch, a tributary of Town Fork Creek.

King has a pressing and immediate need for a sewage system due to commercial and industrial construction, the King School complex, and increasing residential use. As the Grey Report notes:

> "In this connection, we have been advised by representatives of the North Carolina Department of Water and Air Resources that residents of the King area agreed to build a sewage disposal and treatment system when Structure #6 was built. It is our understanding that Structure #6 (a dam in the Little Yadkin Watershed Project) will soon be under construction. Therefore, even if the sewer system were not badly needed, the Town of King would still have to provide sewage treatment because of the construction of Structure #6."

Agricultural soil erosion has abated somewhat, according to the County Foresters, especially in the southern portions of the county. However, increased development where land is cleared makes soil erosion and silting of the streams an ever-present danger.

The Stokes County Extension Agent notes an unusually high use of fertilizer on tobacco lands. High fertilizer run-off into the streams can be as bad as a pollutant as sewage, and in a rural county such as Stokes can be considered as the principal threat to clean streams.

AIR RESOURCE

Prevailing winds and distance from urban centers have so far spared Stokes County the problem of air pollution. There is no guarantee that this will not become a problem in the future, however, with the county constantly inviting in new industry. This is not to say that heavy industry should be avoided, but simply that proper safeguards against air pollution hazards should be prepared for use when they are needed -- probably in cooperation with the regional Air Pollution Control Board.

J. MAN-MADE FEATURES

ROADS

Minor and major county roads (including NC 8, 65, 66, 89, 268, 704, and 772) in Stokes act as rural collector roads for a highway system connecting Winston-Salem metropolitan area to population areas in the northwest (US 52) and the northeast (US 311). They form a good secondary county road net, but are somewhat more difficult for commutation and sustained travel (as opposed to short trip travel), from one place to another in the county. It is the northern portion of the county that suffers most from inaccessibility while the southern part of the county is reasonably well served through its proximity to trunk highways. In all but a few isolated instances, traffic volumes throughout the county are far below design capacity.

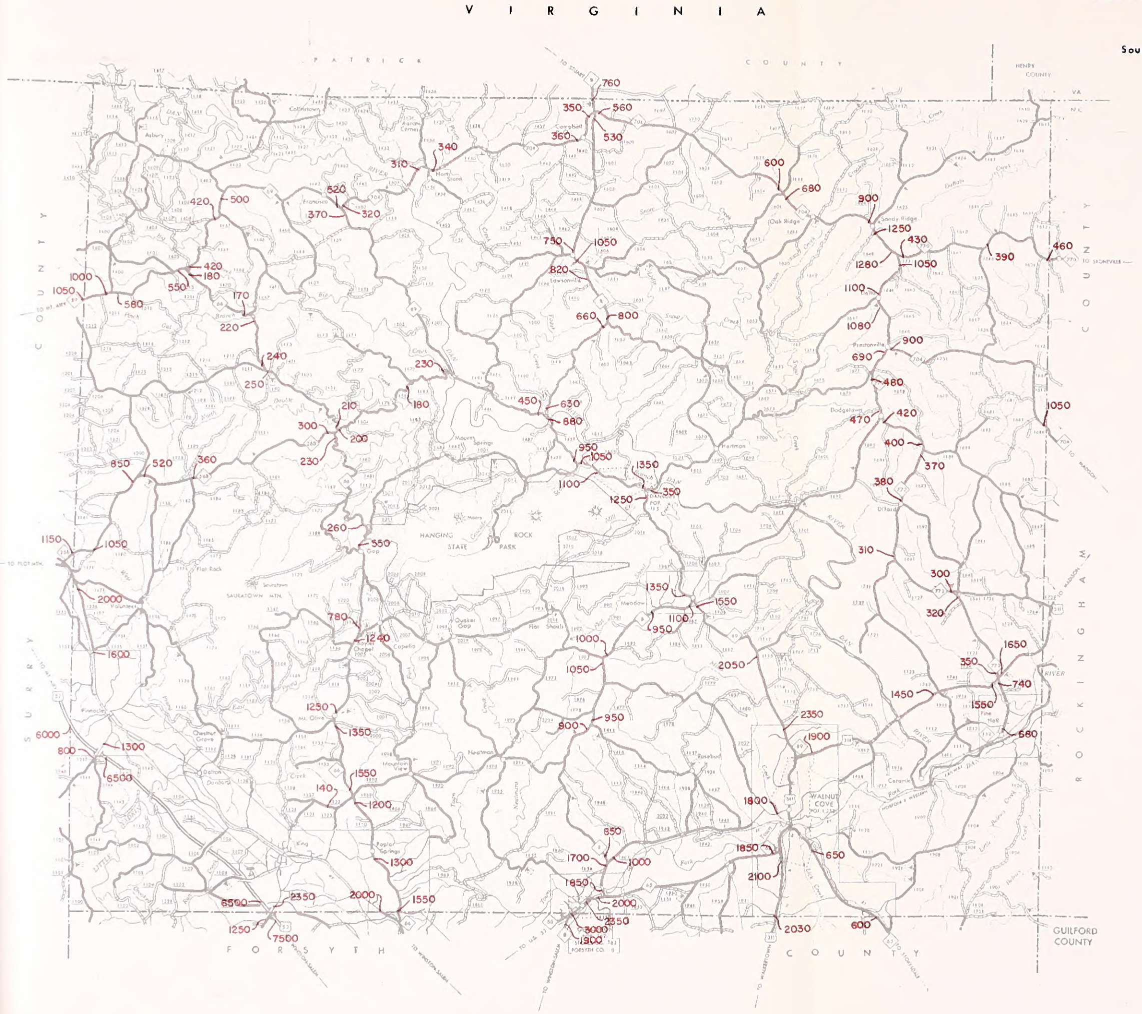
The transportation situation is further complicated by difficult access to the county seat of Danbury from the populated southwestern quadrant. The difficulty of access for tractor trailers into the northeast quadrant, now under consideration for industrial development, is a problem which may tend to hinder this development.

While road alignment in most places is generally as good as the rough terrain will allow, the safety hazard of excessive winding and sharp curves should be noted on NC 89 and 9, approximately two miles on either side of the Danbury corporated limits. This is also the case on NC 66 between State Road 1001 and NC 268.

Peak-period congestion occurs in both the King and Walnut Cove business districts, but is particularly acute in King. While SR 1112, providing access between the King business district and the US 52 interchange is in the process of being

Average Daily
Selected Traffic Volumes
1967

Source: N. C. Highway Commission



STOKES COUNTY
NORTH CAROLINA

0 1 2
SCALE IN MILES

N

MAP-5

widened to relieve this problem, SR 1127 (into which it feeds its traffic for business destinations) suffers from street parking on a pavement built below accepted design width minimums.

Industry near King is locating in an industrial park pattern on vacant land to the west of US 52. Access to the service road from the SR 1112-US 52 interchange is confusing and dangerous to those not familiar with it. Also, a number of prime industrial sites could be made available by extending the service road .4 mile north along US 52 from the site of Carolina Medical Electronics to the International Aero Salvage site, at the point where SR 1105 overpasses US 52.

MASS TRANSPORTATION

Bus travel is of course subject to the same limitations as automobile traffic, and bus service to Stokes County has decreased slightly during the last decade. Prior to the opening of US 52, the Greyhound Bus Company served stops along old US 52 (now SR 1236). Greyhound's Winston-Salem-Mt. Airy service is now non-stop, and its local service along old US 52 makes provisions for only one stop in King.

Piedmont Coach Company runs a Saturday round-trip service from Stewart, Virginia, to Winston-Salem and return. Stops along the way in Stokes County include Germanton, Danbury, and Lawsonville. This is presumably a "shoppers' service" and does nothing to answer the problem of commutation to jobs for low-income people (a situation which the Manpower Representative for the Stokes Community Action Program says is particularly serious at this time).

Stokes County is served by two railroads -- the Southern and the Norfolk and Western -- whose tracks pass within sixty feet of each other in Walnut Cove.

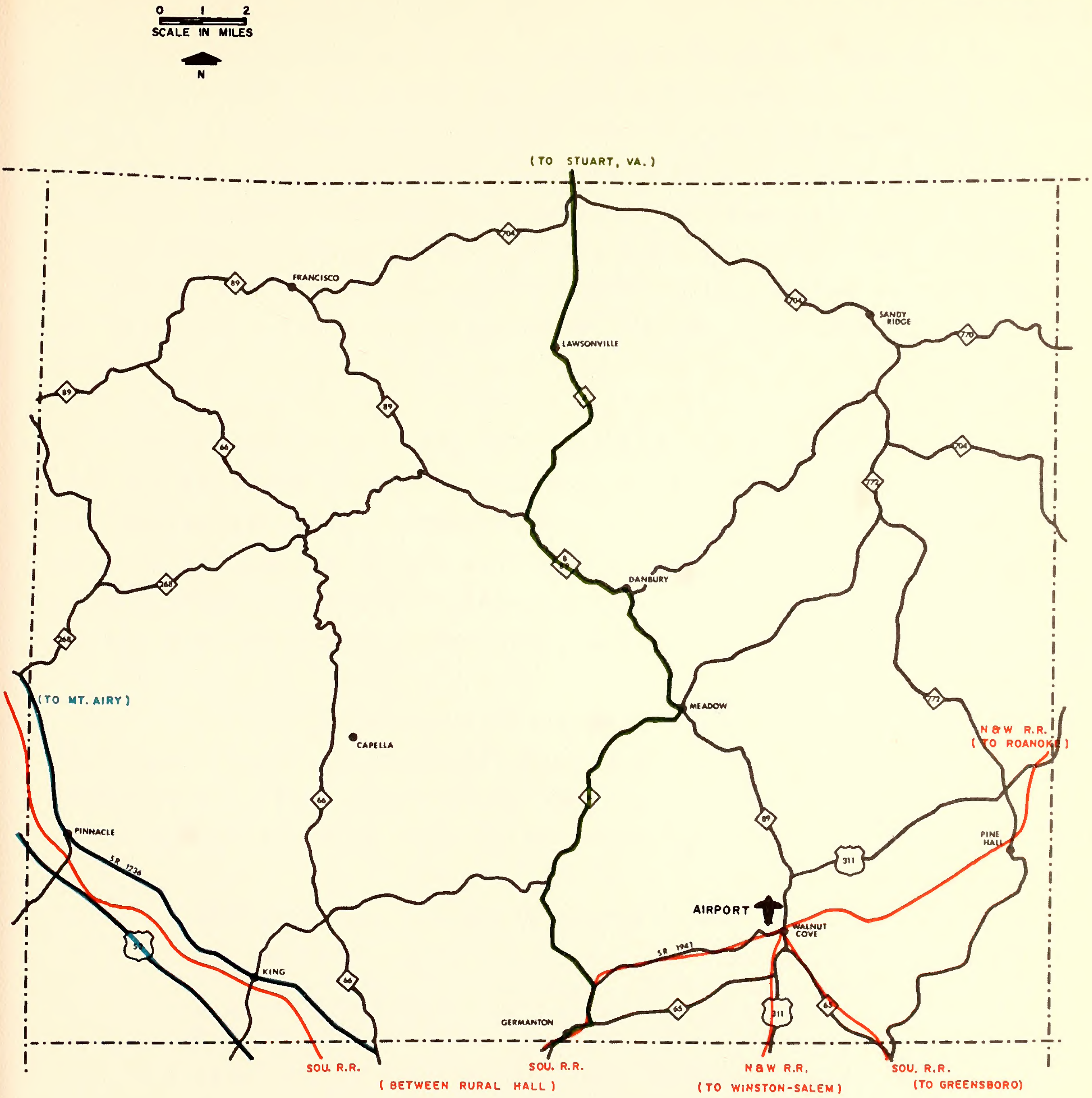
Originally known as the Atlantic and Yadkin Railroad, this branch line of the Southern Railway runs one train a day from Greensboro to Mt. Airy, and return. Stations are located in Walnut Cove, King and Pinnacle. Averaging about sixteen cars a day, this line is presumably subject to the peculiarly favorable economics associated with short line railroad operation as it serves a number of Walnut Cove, Pilot Mountain and Mt. Airy industries, including the granite quarries. It will also serve the Westinghouse Steam Turbine Plant to be constructed at Rural Hall, just south of the Stokes-Forsyth line.

The Shenendoah Division of the Norfolk and Western Railroad operates from Winston-Salem to Hagerstown, Maryland, through Roanoke, Virginia. Three trains (of approximately one-hundred cars each) operate both ways daily carrying coal, automobiles, and tobacco. Another 100-car train will soon be added to handle daily shipments from the Schlitz Brewing Company's new Winston-Salem plant. Within five years, at least two more 100-car coal trains will be needed to supply Duke Power's Belews Lake steam generating plant. This will bring the line's total traffic up to twelve trains per day, and because of coal stockpiling may require additional yard trackage.

Both lines run adjacent to good industrial sites in the southeastern portion of the county, although the Southern is separated by US 52 from the newest areas of industrial development around King in the southwestern section.

STOKES COUNTY
NORTH CAROLINA

Transportation



LEGEND

- GRAYHOUND BUS LINES
- PIEDMONT COACH LINES (SATURDAY ONLY)
- RAILROADS
- AIRPORT (GENERAL AVIATION)

MAP-6

Passenger service on the Atlantic and Yadkin was discontinued in 1940, but it was not until 1962 that the Norfolk and Western eliminated four trains a day between Winston-Salem, Walnut Cove, and Pine Hall. Looking many years into the future, these rail lines may some day take on new importance in Stokes County development. If there is to be a rapid rail mass transit system in the Winston-Salem-Greensboro metropolitan area, it is on existing railbeds such as these that it will probably be built.

Trunk airline service is available to county residents through Friendship Airport in Greensboro, served by Eastern and United Airlines. Piedmont Airlines at Smith Reynolds Airport in Winston-Salem (as well as Friendship in Greensboro) offers local service throughout a regional system with stops as far away as Atlanta, New York, and Cincinnati.

One general aviation airport now exists at Walnut Cove, in Stokes County, with approximately 12 private planes now based there. That there would seem to be a need for one in the southwestern area near US 52 and King is supported by:

1. the attraction airports hold for new industry;
2. the existing location of an aviation-oriented firm, International Aero Salvage, in the King area, already; its need for access to an airport, and its willingness to help develop one;
3. findings of the Metropolitan Airport System report for Guilford and Forsyth Counties pointing strongly to the need for a general aviation airport just north of Forsyth County in this area.

MAJOR UTILITIES

The North Carolina Rural Electrification Authority reports 100% coverage of Stokes County by power transmission lines. The only limitation on certain commercial loads is a security deposit. The northwestern quadrant of the county is served primarily by Yadkin Electric Membership Corporation, and the southwest quadrant by Duke Power Company. The rest of the county is served on major county roads by Davidson Electric Membership Corporation.

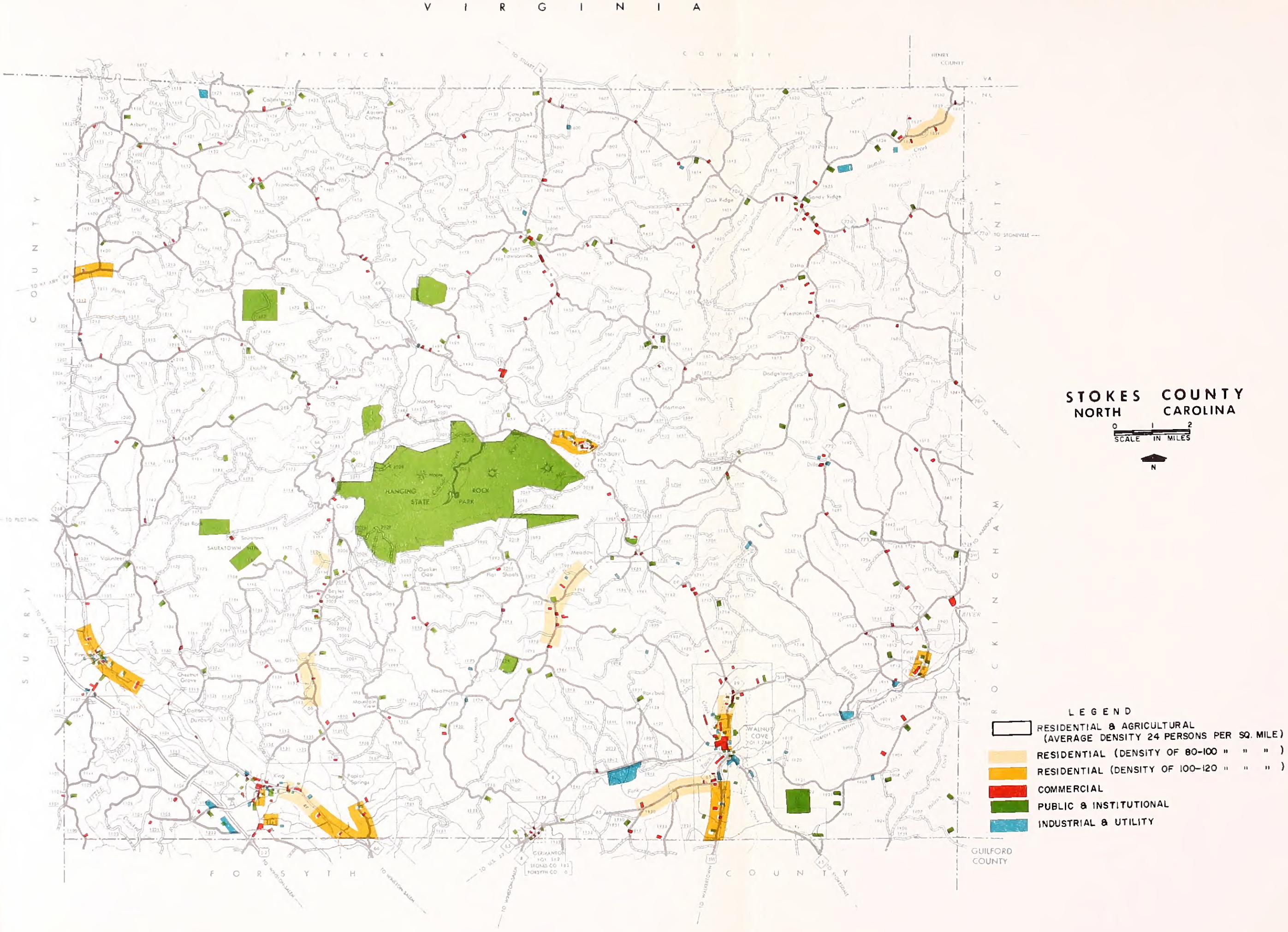
The North Carolina Gas Service Division of Pennsylvania and Southern Gas Company has a natural gas pipeline serving the southeast corner of the county. It parallels US 311, SR 1911, and SR 1915, terminating at the closed Pine Hall Brick and Pipe Company, Plant #2, at Ceramic.

Approximately 60% of the people in Stokes County have telephones, but which telephone company serves them depends on where they live: the Lee Telephone Company (division of Central Telephone Company) with headquarters in Madison, serves the northwest, northeast and southeast quadrants of Stokes County, including Quaker Gap, Sandy Ridge, Lawsonville, Danbury, Walnut Cove, Germanton, and Pine Hall.

Central Telephone Company, with headquarters in Mt. Airy, serves Pinnacle in the upper part of Yadkin Township. Part of the Pilot Mountain Exchange, Pinnacle is also tied through Central Telephone Membership Corporation, as well as to Central's Surry County exchanges.

The Old Town Telephone System, Inc., with headquarters in Old Town, serves King, and ties that section of the county to the Winston-Salem exchanges.

GENERALIZED
EXISTING LAND USE



MAP-7

Lee Telephone Company is engaged in a program of burying a number of its transmission cables and is adding ten additional trunk line circuits from Danbury to Walnut Cove. Direct distance dialing is scheduled to be in operation by August, 1970; and four-party line service will have eliminated the present eight-part groups by December, 1972. Service and policy of the three companies is coordinated by Bell System intercompany representatives at weekly meetings, and it is through these meetings that extended area service is constantly expanded to link the various exchanges of the three companies.

K. EXISTING LAND USE

RESIDENTIAL

Residential land use is spread evenly along the road system throughout Stokes County. Concentrations of 100-120 persons per square mile exist at Pinnacle, King, Walnut Cove, and on a portion of NC 89 at the Surry County line near Westfield. Densities of 80-100 persons p er square mile occur on the outskirts of King and Walnut Cove, at Mt. Olive and Capella on NC 66, on NC 8 between Flat Shoals and Meadow, and on a portion of SR 1625 in the extreme northeast corner of the county. Densities of 40-80 per square mile occur in the southern part of the county, while the remainder of the county averages 25 persons per square mile.

The greatest problem involving residential land is the strip development taking place along the roads. This threatens to "land lock" quantities of desirable land located back from the roads, and increases the possibility of future blight of houses presently being built along these roads. This is particularly evident around King. The future may well see these homes' desirability (and therefore their value) decrease because of their proximity to heavy traffic and because of their location so near the front lot line when road widening occurs.

In the Fall of 1968 a "windshield survey" of the housing conditions throughout Stokes County was made by Division of Community Planning personnel. Houses in good condition (i.e., well-maintained) were classed as "standard" as opposed to substandard units showing signs of roof deterioration, or structural deficiencies such as open foundations, damaged chimneys, deteriorating door and window frames, sagging roof line, large exterior wall cracks, sagging porches. General neglect or lack of paint did not classify a house or dwelling unit substandard unless it occurred in conjunction with the structural or roof deficiencies listed above.

The extremely low number of vacant standard condition units shows that good housing is in short supply in Stokes County.

Until just a few years ago, financing of any type of housing in the county without governmental aid was difficult to arrange, and this situation was not relieved until the opening of the United Savings and Loan in King. The moderate priced housing supply is still not sufficient, and this is a negative factor in attracting new commerce and industry; however, a number of new moderately priced ($20,000-$25,000) subdivisions are opening up in the southern part of the county.

The Farmers Home Administration has been making housing loans to non-farm rural residents since 1960. Since then housing loans at 4% to 5 1/8% have been made to low and middle income persons having salaries between $5,000 and $7,000 per year,

Table 6 Stokes County Housing Condition and Occupancy by Township and Incorporated Towns

Townships and Incorporated Towns	DWELLING UNITS AND CONDITION												Town-ship Dwell. Unit Total
	Single-Family								Multi-Family		Mobile Homes		
	Standard Occupied	Per Cent	Standard Vacant	Per Cent	Sub-Standard Occupied	Per Cent	Sub-Stand-ard Vacant	Per Cent	Standard	Per Cent	Standard Occupied	Per Cent	
Beaver Island	377	66.5	-	-	115	20.3	39	6.9	-	-	36	6.3	567
Big Creek	443	75.3	2	.3	89	15.1	33	5.6	-	-	21	3.6	588
Danbury (Town of Danbury)	134 (55)	62.9	3 (1)	1.4	35 (4)	16.4	18 (2)	8.5	10 (10)	4.7	13 (1)	6.1	213 (73)
Meadows Town of Germanton)	629 (41)	69.2	- (-)	-	152 (-)	16.7	34 (-)	3.7	- (-)	-	94 (2)	10.3	909 (43)
Peters Creek	374	68.9	-	-	89	16.4	32	5.9	-	-	48	8.8	543
Quaker Gap	319	71.2	1	.2	82	18.3	25	5.6	-	-	22	4.9	449
Sauratown Town of Walnut Cove)	819 (310)	72.4	1 (-)	.08	191 (50)	16.9	15 (2)	1.3	19 (7)	1.7	86 (7)	7.6	1,131 (376)
Snow Creek	652	71.1	9	1.0	130	14.2	50	5.4	-	-	76	8.3	917
Yadkin	1,196	73.9	2	.1	175	10.8	45	2.8	8	.5	192	11.9	1,618
STOKES COUNTY TOTAL	4,943	71.3	18	.3	1,058	15.3	291	4.2	37	.5	588	8.5	6,935

Source: Division of Community Planning

with a house in a $12,000 range considered the goal. Beginning this year, however, the FHA is aiming at those with incomes of $3,000 to $5,000 per year -- mostly those who cannot get credit -- with a home in the $8,000 range now the goal. In fiscal year 1967, the FHA made 34 housing loans in Stokes County totalling $359,460. During fiscal year 1968 only 20 loans were made, however, totalling $171,870. This gave Stokes County a total of 149 active FHA housing loans as of 1968.

FHA's Stokes County representative suggests that the declining number of loans can be explained by two major difficulties: (1) the problem of making the people of the county aware of the loan possibilities to them; and (2) working with and processing the loans of low income families. Procedures are complex enough with anyone who wants a loan, but processing time for loans to low income people averages as much as four times as long as for anyone else, because the FHA representative must take time to set up their family budgeting, help them acquire land, and generally aid them in detail on most of the other aspects of preparation for home construction.

The FHA representative sums it up in the sentence: "An overall housing program for Stokes is needed" and this sentiment has been similarly voiced by the County Commissioners as well as the Planning Board. It is given even more emphasis by personnel associated with the Stokes County Community Action Program. After a detailed survey of 834 low income families, CAP personnel have concluded that Stokes needs a low income housing program more than its neighbor counties also associated with CAP (Surry, Yadkin and Davie Counties). (Detailed recommendations appear in the Land Development Plan.)

Yadkin Township would have to be classed as the area having the most residential potential because of an available water system, as well as the nearness of US 52. The southern portion as a whole will be most attractive for those commuting to Mt. Airy, Forsyth and Guilford Counties, and lower Rockingham County. The northern half will be most desirable for those working in Stuart, Virginia; with Big Creek and Quaker Gap Townships drawing those working in Surry County; Snow Creek and Beaver Island Townships also attracting those commuting to Rockingham County. Northern Stokes is also ideal for vacation homes. For any resident employed within Stokes County an excellent home site should be available near the job.

Realization of full residential potential within Stokes County will require the fastest possible expansion of water and sewer systems, constant improvement of the school system, subdivision regulations, a complete building inspection program, and zoning in the most populated areas where protection is most needed.

AGRICULTURAL

The statistics of agricultural land use may be found in the 1968 Stokes County Commissioners' Farm Census Summary, reprinted in the Appendix. Approximately 30% of the land in the county is now under agricultural usage. However, only about 21% of it is in harvested crop land and pasture.

As suggested in the Economic Potential Study, the trends of agriculture land use seem to be reasonably clear:

1. Small marginal farms are becoming less profitable, and are being abandoned or consolidated.

2. Topography of the county does not lend itself particularly well to mechanized farming, and some of the most suitable crop land for mechanized farming is lying idle for lack of farm labor.

3. More and more farm families are earning their livelihood by outcommuting or by taking non-farm jobs within the county.

4. Mechanized raising of livestock (cattle, pigs, and poultry) offer the best long-term economic hope for agriculture in the county.

The Stokes County Agriculture Extension Agent adds these observations:

1. A natural result of the shortage of farm labor is that fewer farms are being operated by tenant farmers.

2. Tobacco as a leading crop is far from dead, and probably 75% of agricultural income comes from tobacco. At the same time that the tobacco yield per acre has increased, the number of acres in production has declined, and government allotments have also declined.

3. The small family farm will not disappear from the county in the foreseeable future, as the result of "twilight agriculture" by those who commute to jobs during the day.

4. Absentee ownership of land is probably hurrying the conversion to animal production, but eventually more land will go into intensive food crops, such as strawberries, vegetables, etc.

COMMERCIAL

The centers of commercial retail and service land use activity in Stokes County occur at King (52 units) and Walnut Cove (49 units).

There is an even distribution of service stations and/or groceries at crossroads throughout the county, and a higher proportion of commercial units in the unincorporated towns. As a further indicator of the focus of commercial activity, four units which are normally described as supermarkets are located in Walnut Cove, King, Pinnacle and Meadow. The only town possessing the new construction and ample parking of a shopping center, however, is at King -- near the US 52 interchange. The commercial pattern therefore follows the largest concentrations of population, but (at least in terms of total population and distance to weekly shopping sources) leaves the northern portion of the county underserviced.

At present, commercial uses are reasonably well concentrated, but strip commercial development is beginning to make itself felt around the higher centers of population (i.e., King, and to some extent Walnut Cove). Control of this strip development, plus protection of high potential highway commercial sites are problems that will soon have to be solived through enforced zoning regulations, etc.

INDUSTRIAL

Industrial activities are concentrated primarily in Sauratown and Yadkin Townships, with a single exception being the United Elastics plant in Big Creek Township near Francisco in the northwest. Small sawmills, feedmills, and warehouses are spread fairly evenly throughout the remainder of the county.

By far the largest purely industrial tract is occupied by the R.J. Reynolds Tobacco Company Brook Cove Plant, and accounts for almost half of the assessed valuation. Duke Power's Belews

Lake steam generating power station, also in Sauratown Township, will eventually amount to a total investment of $240 million.

Industry at King is tending to concentrate itself into an "industrial park" setting on the west side of US 52. During the last year three new firms have located there, adjacent to each other:

-- International Aero Salvage; 6,720 square feet; 7 full-time and 8 part-time employees; 50% expansion of floor space underway. (Aircraft rebuilding; mobile home and boat sales and service.)

-- Caroling Medical Electronics, Inc.; 6,000 square feet; 20 employees. (Electronic medical devices and monitering equipment.)

-- Queen Manufacturing Corp. (Division of Friese Corp.); 30,000 square feet; 71 employees. (Private label curtains.)

A number of good industrial sites are available in the northern half of Stokes County as well as at King and Sauratown Township, but there is a need for protecting the best sites from encroachment by single-family residential units. This protection is essential if Stokes is to attract badly needed industry in the future. It can be accomplished by zoning, and by options taken by the area industrial corporations.

PUBLIC AND INSTITUTIONAL

1. Major Social Facilities

There are five community centers in Stokes County, and along with the nine fire departments and rescue squads, they serve a social function over and above their recreational and public functions. However, the 92 churches in the county are the dominant factors socially. Other major social facilities include:

- -- The Community Action Program building at Walnut Cove
- -- Stokes County Hospital and Health Clinic at Danbury
- -- Welfare Department at Danbury
- -- Health Clinic at Walnut Cove.

2. Major Cultural Facilities

- -- Ten elementary schools
- -- Two high schools
- -- Two newspapers
- -- Two libraries
- -- Adult Education Programs at North and South High Schools
- -- Forsyth Technical Institute (and to a very small degree)...
- -- Surry Community College

3. Major Recreation Facilities

- -- Churches, fire departments, fraternal organizations and community centers (a lack of planned recreational activities for youth, however, has been noted with regard to these facilities)

- -- Drive-in theater at King
- -- Fairgrounds at King
- -- Parks at Walnut Cove and Hanging Rock
- -- The 311 Auto Raceway
- -- Billiard parlors

A justifiable differentiation can be made within the recreational category between those facilities which most benefit permanent residents and those which are tourist oriented. This cannot be a rigid division, however, since tourists will make some use of resident facilities, while residents will occasionally vary their recreation activities through use of tourist-oriented facilities. Existing tourism facilities within the county (some public and some private) include:

- -- Transient trailer and camping parks (Sauratown and Danbury Townships)
- -- Golf courses (Sauratown Township)
- -- Fishing ponds (Danbury and Peters Creek Townships)
- -- Private vacation club preserves (Big Creek and Sauratown Townships)
- -- Vacation homes (some publicly owned at Hanging Rock Park), (Danbury, Big Creek, Quaker Gap, Sauratown and Yadkin Townships)

Along with historic sites, Hanging Rock Park, and regional recreation facilities such as the nearby Pilot Mountain State Park, the nucleus facilities for the development of tourism in the county already exist.

4. Major Historical Sites

There are not a great number of historic sites in Stokes County, mostly because of the lack of population and development in the early years, but the ones that do exist should be exploited both for the cultural benefit of the county's residents and as a key part of tourism development.

- -- The proposed Iron Foundry Park in Danbury has received support from State and Federal officials, and has resulted in the formation of the Stokes County Historical Society. It is centered around the rectangular smelter of an iron foundry that operated on the Dan River until it was finally destroyed during Stoneman's Raid in the Civil War. It is located on a site which, if proper access can be provided, should be ideal both for recreation and tourism purposes.

- -- The Rock House is a three-story stone ruin of rather unique architecture, located just north of the Sauratown Mountain Range at a junction of SR 1175, 1186, and 1187. It is already a tourist attraction for local residents, with a number of visitors to the site each weekend. Begun in the 1770's, it was once under consideration for reconstruction by the Daughters of the American Revolution, and is at the present time the subject of a research study being done at Wake Forest University. Its present location is in the heart of the "summer camp" district.

-- Shepherd's Mill is privately-owned and of early 19th Century vintage. It is located on SR 1674, about five miles northeast of Danbury. The building has been completely restored and may be opened for visitors next year.

-- The Dalton Plantation site, located between King and Pinnacle on SR 1236 and easily accessible from US 52, offers considerable potential as a historic tourist attraction. The main plantation house is deteriorated but structurally sound, to judge by its being able to support the weight of hay stored now on the first two floors. When occupied, the third floor was used as a ballroom. A number of slaves were quartered in the basement during pre-Civil War days, and large brick fireplaces for their cooking and warmth still remain. The house has simple and attractive architectural lines of a style all its own. At its peak, there were over forty outbuildings to the plantation, but all that remains of them now are a few foundation traces.

-- The building which once housed Dalton Academy, one of the earliest schools in the county, is just a half mile south of the Dalton Plantation on SR 1127, and may once been part of it. It was a private residence until a few months ago, and the exterior, at least, is in reasonably good condition. The front of the two-story building is characterized by a double-doored entrance, topped by a rectangular, fan light-type window.

-- Vade Mecum, one of the county's three famous old resort springs hotels, remains intact and well maintained as an Episcopal Church camp near Danbury. Arrangements to include it on eventual historic site tours could probably be made. Most striking attraction in the beautiful natural surroundings is the original main hotel building, constructed partly of half-moon shingles and partly of white clapboard, in a style typical of the county during the 1870's.

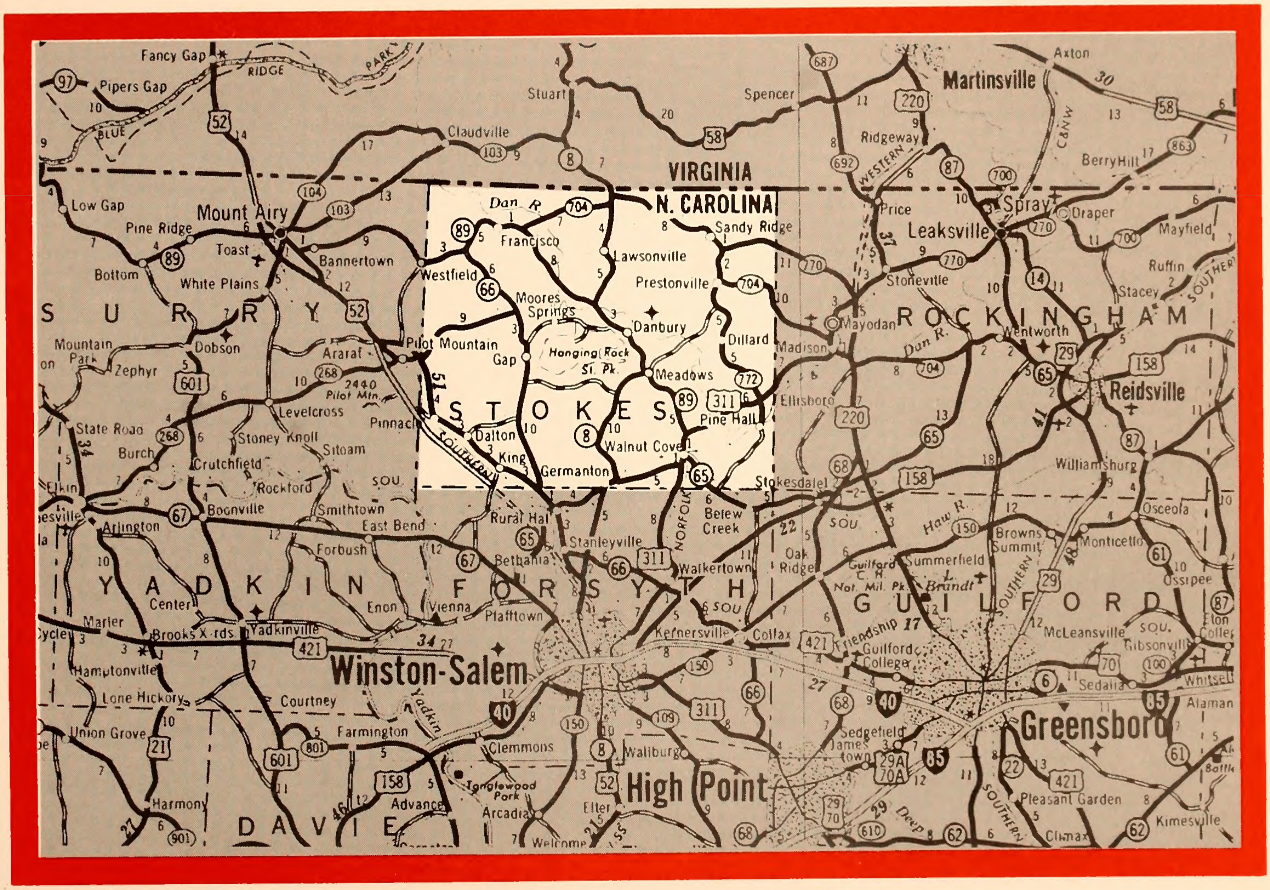
-- All that is left of another of the resorts is the Moores Spring House. Located just off SR 1001 near Danbury, Hanging Rock State Park, and Vade Mecum, the octagonal victorian style, two-story building is at a point where repairs will soon have to be made. The spring inside can still be tapped with an electric pump. The spring house's setting in a mountain glen by a stream would make it also a promising site for a county picnic ground.

Energetic development of tourism in the northern portion of the county would have to take into consideration the designation of the Town of Danbury itself as a historical site. Danbury has been characterized by writers in the past -- perhaps condescendingly -- as a "quaint little mountain town." Probably due to its past isolation, its Court House, large old homes, and two unique old hotels have not been removed or spoiled by incompatible land uses over the years. The fact that the town is the County Seat, and is located near Hanging Rock Park and the County Hospital in the heart of Stokes' scenic Sauratown Mountain range, make it a natural focal point for development of tourism in the area. Serious consideration should be given to some sort of historic preservation which would at the same time allow for nearby commercial growth.

L. CONCLUSION

Stokes County's growth in the past has been slow, but as shown in the Economic Potential Study, development is now becoming more rapid. The county's location, development pattern and the potential of its land, as outlined in this study, give it the capability for continued constructive growth in the future if its development is planned, natural attributes protected, public facilities and transportation improved, and if its future is worked for energetically by its residents.

The Land Development Plan will examine in detail the forces for accomplishing this growth, guidelines for how and where development should take place, and the all-important question of how best to implement the comprehensive planning that is now being done by Stokes County.



LAND DEVELOPMENT PLAN

M. INTRODUCTION

The Land Potential and Economic Potential Studies have provided basic data on the characteristics of the county's people, land and activities. This Land Development Plan will attempt to provide the comprehensive general framework necessary to serve as a guide to the future harmonious development of Stokes County.

The framework should be flexible at this stage of development for three reasons:

1. the county's overall potential for the future is great and varied, providing a number of alternatives for the future;

2. no dominant land use pattern has manifested itself which would have the affect of forcing the county into a prohibitively narrow course of future land development; and

3. Stokes' future depends on the role it plays as part of a dynamically developing metropolitan area, which is in turn part of a rapidly growing region of the nation.

The forces for change which are brought upon it in this role will be the primary determinants of its future development. For these reasons this plan is conceived with the maximum of flexibility, while at the same time it is based on practical proposals designed to increase the county's chances for successful future development. These proposals reach toward the goals of:

-- making Stokes County a good place to live;
-- conservation and development of natural resources;
-- development of safe and attractive residential areas;
-- increased industrial employment and production, as well as increased income from commercial and tourism activities;

-- provision for convenient business areas which are not scattered haphazardly along major traffic routes;
-- encouragement of compact development which can be served by utilities and other services at a minimum cost to the public;
-- improvement of the transportation system throughout the county;
-- adoption of new, and the enforcement of existing planning tools such as zoning ordinances, subdivision regulations, building and housing codes, that will help implement the plan.

The county's growth will first be discussed quantitatively, in terms of future land use requirements, and then qualitatively, with regard to land development factors. Land development proposals and recommendations for implementation will then be made. Implementation of the plan, however, is the joint responsibility of the governing officials and private citizens. Support from both groups will be necessary to get favorable results.

N. FUTURE LAND USE REQUIREMENTS

Although many variables must be considered in determining the future land use requirements presented in the accompanying table, they are based, primarily, on these assumptions:

1. The population of the county will continue to increase as projected in the Economic Potential Study.
2. Residential land needs will increase in proportion to the population increase through the construction of all types of housing, including multi-family (higher density) where development factors are favorable, and larger lot size (lower density) homes, in addition to the present middle range (one-half to an acre) home construction trend now evident.

3. More commercial land will be required to serve both residents and visitors. Also, it will be built on larger lots to provide greater parking and expansion room. However, the evenly spaced residential usage throughout the county will continue to provide a place for the majority of the small grocery operations and at the same time will limit as well as tend to centralize the creation of new commercial centers. This conclusion is further reinforced by the availability of regional (as opposed to local) commercial centers all around the outside of the county (in Mt. Airy, Madison, Winston-Salem, and Greensboro). Therefore, the need for commercial land should grow in proportion to the population increase in view of the predominantly local nature of the need.

4. While the amount of land in industrial use is low at the present time, industrial potential for the county during the planning period is relatively high. Single story construction requires more land for operations, construction, parking and expansion than in the past. For these reasons, a significant increase in land to be reserved for industrial use is considered reasonable.

5. The persons-per-100 ratio of existing public and institutional land is misleading, since 90% of it represents the acreage of Hanging Rock Park. It can be assumed that (a) active and passive recreation needs will continue to grow; (b) community facilities such as schools, community centers and churches will have to be created and expanded faster than in the past to catch up with the needs of the present population as well as to provide for future population increases (to be studied in more detail in the forthcoming Community Facilities Plan); (c) a significant part of the county's future economic potential depends on institutional utilization of land for retreats, summer camps and other private centers. The growth of this use normally requires large tracts of undeveloped land. On the basis of these assumptions, future need for public and institutional land use could be justified in about the same proportion as the population increase, but is only projected at one-half that rate because of the high proportion of the acreage represented by Hanging Rock Park.

6. Future utilization of land for roads should not be great considering the high amount of secondary mileage now in existence, and primary system mileage will probably not be significantly increased during the planning period. Some increase in overall road acreage is bound to take place as part of new development, but it should be kept to a minimum if improved land use policies are encouraged through subdivision regulations and planned unit residential development.

TABLE 7 Stokes County Existing Land Use Quantities and Projected Needs

Use	Existing Acreage[1]	Acreage per 100 Persons[2]	Future Need Projection Factor[3]	Additional Acreage Needed to 1990[4]
Residential (Year-round occupancy)	6,739	25.2	1.0	3,679
Commercial	632	1.4	1.0	205
Public and Institutional	44,210	165.6	.5	12,130
Industrial and Utility	1,234	4.6	3.0	2,022
Roads	7,658	28.6	.25	1,048
Agricultural	87,744	328.6	--	--
Undeveloped	144,533	541.3	--	--
Total	292,480	1,095.4	--	19,084

[1] Estimates based on Division of Community Planning Survey, September, 1968.

[2] Based on Division of Community Planning estimate of 1968 population at 26,700 persons.

[3] Factors determined by relating present land use to future use, based on trends and growth prospects listed in text. A factor with a numerical value of 1.0 will, for the calculation explained in the note below, act to increase a category of acreage by about the same amount as the projected increase in future population.

[4] Based on factors mentioned above, and Division of Community Planning projected 1989 population of 41,346. Example of calculation:

Residential Use 41,346 (1989)
-26,700 (1968)
14,646 Population Increase

Thus, 146.5 (100 persons) x 25.2 x 1.0 (col.2)(col.3) equals 3,679 additional acres needed.

7. Agricultural land will not increase (as farm consolidation takes place), and may actually decrease as the agriculture portion of land acreage contributes, along with the undeveloped land portion, to the acreage needed for the other uses already noted.

O. LAND DEVELOPMENT FACTORS

Vital to the formation of future land development policies and proposals are the qualitative criteria by which the suitability of a given area for a proposed land use must be judged. In the following tables, a number of the more important land development factors are compared to and correlated with the overall major land use categories which might be expected to play roles in the county's future development. Portions of the county are then evaluated with regard to the same land development factors.

Careful examination of both tables will reveal strong development potential for the county. The southwest and southeast portions of the county would seem to be very similar in many respects with the great strength of the southwest portion around King being its access to a primary trunk highway. The southeast portion rates highly (especially for industrial development) on the factors of the sewer system now under construction in Walnut Cove, proximity to a general aviation airport, and the availability of relatively large tracts of land in reasonably unified ownership.

TABLE 8 Qualitative Land Development Factors Correlated to Possible Land Uses

Symbols X - Necessary / - Desirable - - Unnecessary	Residential					Industrial				
	Single-Family	Multi-Family	Vacation Homes	Commercial	Highway Commercial	Heavy	Light	Public and Institutional	Recreation/Tourism	Roadside Tourist (Non-Comm.)
Topography: Flat terrain (less than 6% slope)	/	X	-	X	X	X	X	/	-	/
Not cut by streams	/	X	-	/	X	X	X	-	-	X
Not subject to flooding	X	X	X	X	X	X	X	X	/	/
Streams available for recreation	-	-	/	-	-	-	-	/	X	-
Outstanding scenic view	/	-	/	-	/	-	-	/	/	X
Access: Primary (truck) highway access	/	/	-	/	X	X	/	-	/	/
Secondary road access	X	X	/	X	/	X	X	X	X	X
Railway access	-	-	-	-	-	X	/	-	-	-
30 min. access to metropolitan population centers	/	/	-	-	-	/	/	-	/	-
15 min. access to local population centers	-	-	-	X	/	X	X	X	/	-
45 min. access to trunk airport	/	-	/	-	-	X	X	-	-	-
Close access to general aviation airport	-	-	/	-	-	/	/	-	-	-
Close to higher education and research facilities	/	/	-	-	-	/	/	/	/	-

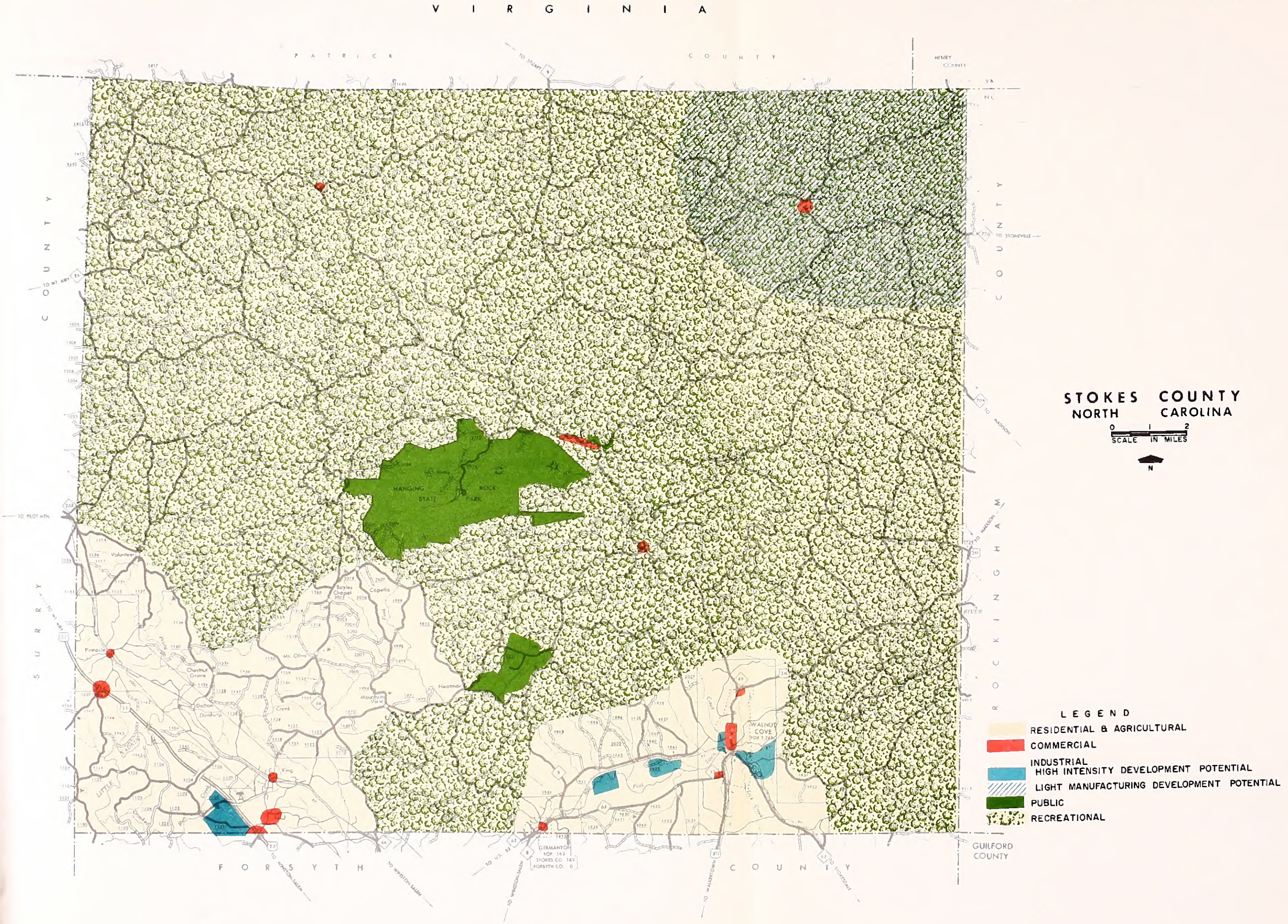
	Residential			Commercial	Highway Commercial	Industrial		Public and Institutional	Recreation/ Tourism	Roadside Tourist (Non-Comm.)
	Single-Family	Multi-Family	Vacation Homes			Heavy	Light			
Services										
Piped water system	/	/	–	/	/	X	/	/	–	–
12" mains for fire insurance rating	/	/	–	/	/	X	/	/	–	–
Sewer system	/	X	–	/	/	X	/	/	–	–
Fire protection	X	X	/	X	X	X	X	X	/	–
Superior elementary and secondary education	X	X	–	–	–	X	X	–	–	–
Natural gas	/	/	–	/	/	/	/	/	–	–
Land Use										
Large sites available in reasonably unified ownership	/	X	–	/	/	X	X	X	X	–
Compatible adjoining land use	X	X	X	X	X	X	X	X	X	X
Zoning ordinance in effect	X	X	/	–	–	/	/	/	/	–
Subdivision regulations in effect	X	X	/	–	–	/	/	/	/	–
Water										
Uncontaminated source	X	X	X	X	X	X	X	X	X	X
Continuous supply	X	X	X	X	X	X	X	X	/	/
Soil										
Suitable for septic tanks if sewer not available	X	X	X	X	X	–	X	X	/	/
Depth suitable for foundations	/	/	–	/	/	/	/	/	–	–
Bearing strength suitable for heavy structures	–	–	–	/	/	X	/	/	–	–

(Table 8 continued)

	Residential			Commercial	Highway Commercial	Industrial		Public and Institutional	Recreation/ Tourism	Roadside Tourist (Non-Comm.)
	Single-Family	Multi-Family	Vacation Homes			Heavy	Light			
Land Cover										
Forested	/	/	/	-	-	-	-	/	X	/
Wooded lots and scattered trees	/	/	X	/	/	/	/	/	X	X
Cleared	-	-	-	/	/	/	/	-	-	-
Adequate labor supply	-	-	-	X	X	X	X	X	/	-
Development Corporation Aid	-	-	-	/	/	/	X	/	/	/

Source: Division of Community Planning

Land Potential



MAP-8

TABLE 9 (continued) Qualitative Land Development Factors Generally Correlated to Portions of Stokes County

Symbol X - Available / - Available in some cases - - Not available	Southwest Stokes (King Area)	Southeast Stokes (Walnut Cove)	Central Stokes (Danbury)	North Stokes
Topography				
Flat terrain (less than 6% slope)	X	X	-	/
Not cut by streams	X	X	X	X
Not subject to flooding	X	X	X	X
Streams available for recreation	X	X	X	X
Outstanding scenic view	/	-	X	/
Access				
Primary (truck) highway access	X	/	-	/
Secondary road access	X	X	X	X
Railway access	/	/	-	-
30 min. access to metropolitan population centers	X	X	X	/
15 min. access to local population centers	X	X	X	/
45 min. access to trunk airport	X	X	X	/
Close access to general aviation airport	/	X	/	-
Close to higher educational and research facilities	/	/	-	-
Services				
Piped water system	X	/	/	-
12" mains for fire insurance rating	/	/	-	-
Sewer system	-	/	-	-
Fire protection	X	X	X	X
Superior elementary and secondary education	-	-	-	-
Sufficient electric power	X	X	X	X
Natural gas	-	/	-	-
Land Use				
Large sites available in reasonably unified ownership	/	X	X	X
Compatible adjoining land use	X	X	X	X
Zoning ordinance in effect	-	/	-	-
Subdivision regulations in effect	-	-	-	-
Water				
Uncontaminated source	X	X	X	X
Continuous supply	X	-	-	/

Table 9 (continued)

	Southwest Stokes (King Area)	Southeast Stokes (Walnut Cove)	Central Stokes (Danbury)	North Stokes
Soil				
Suitable for septic tanks	X	X	/	X
Depth suitable for foundations	X	X	/	/
Bearing strength suitable for heavy structures	X	/	X	X
Land Cover				
Forested	/	/	X	/
Wooded lots and scattered trees	X	X	X	X
Cleared	X	X	/	X
Adequate labor supply	X	X	X	X
Development Corporation aid	X	/	X	X

Source: Division of Community Planning

The central portion of the county around Danbury shows availability of access that sets it apart to some degree from the northern half of Stokes. At the same time, it is generally lacking the flat terrain and septic tank soil suitability characteristics that North Stokes possesses. The significant difference in the occurrence of land development factors between the northern and southern halves of the county indicates both a different type of development for each of these sections, and the necessity for the improvement of certain governmental services which will more nearly equalize their development potential.

In the future, both halves of the county will contribute almost equally to each other; and conversely, the harmonious development of the county is dependent upon all parts of Stokes, not just a single section.

P. THE DEVELOPMENT PLAN

A comprehensive overview of Stokes County's development potential indicates three major development land uses for the future:

I. The southern portion of the county should support the major share of industrial growth during the planning period.

II. While the entire county will benefit from the addition of various categories of residential usage, the southern portion should receive the largest amount of suburban housing caused by relocation from the Winston-Salem area.

III. The third major development influence involves a prime recreation area in Stokes -- ideally suited to institutional camps and retreats, tourism and recreation uses, vacation homes, wildlife sanctuaries, and non-commercial roadside tourist attractions. This includes all of Danbury Township and Hanging Rock State Park as well as portions of every other township. The creation of such a coordinated multi-use recreation area within these boundaries would be of tremendous benefit to the future development of the county, while at the same time the intermixing of these uses would present special problems.

AGRICULTURAL ELEMENT

This land use category includes farm land, pastures, forested, and idle lands. As discussed in the Economic and Land Potential Studies, agriculture is an important aspect of Stokes' economy and should remain so. However, the number of farms is decreasing rapidly as urban development occurs and as consolidation takes place due to the introduction of new agricultural uses. Even though a significant number of existing farms are too small, too rocky, and/or too sloping for the efficient use of mechanized farming methods, good farm land occurs in all but the central portion of the county.

The county's prime farm land occurs along Town Fork Creek and in flat lands of the lower Dan River. In addition to mechanized farming methods, agricultural income will undoubtedly be increased by the introduction of concentrated cash crops (such as vegetables, strawberries, etc.), and continuation of the trend toward mechanized raising of livestock (cattle, pigs and poultry).

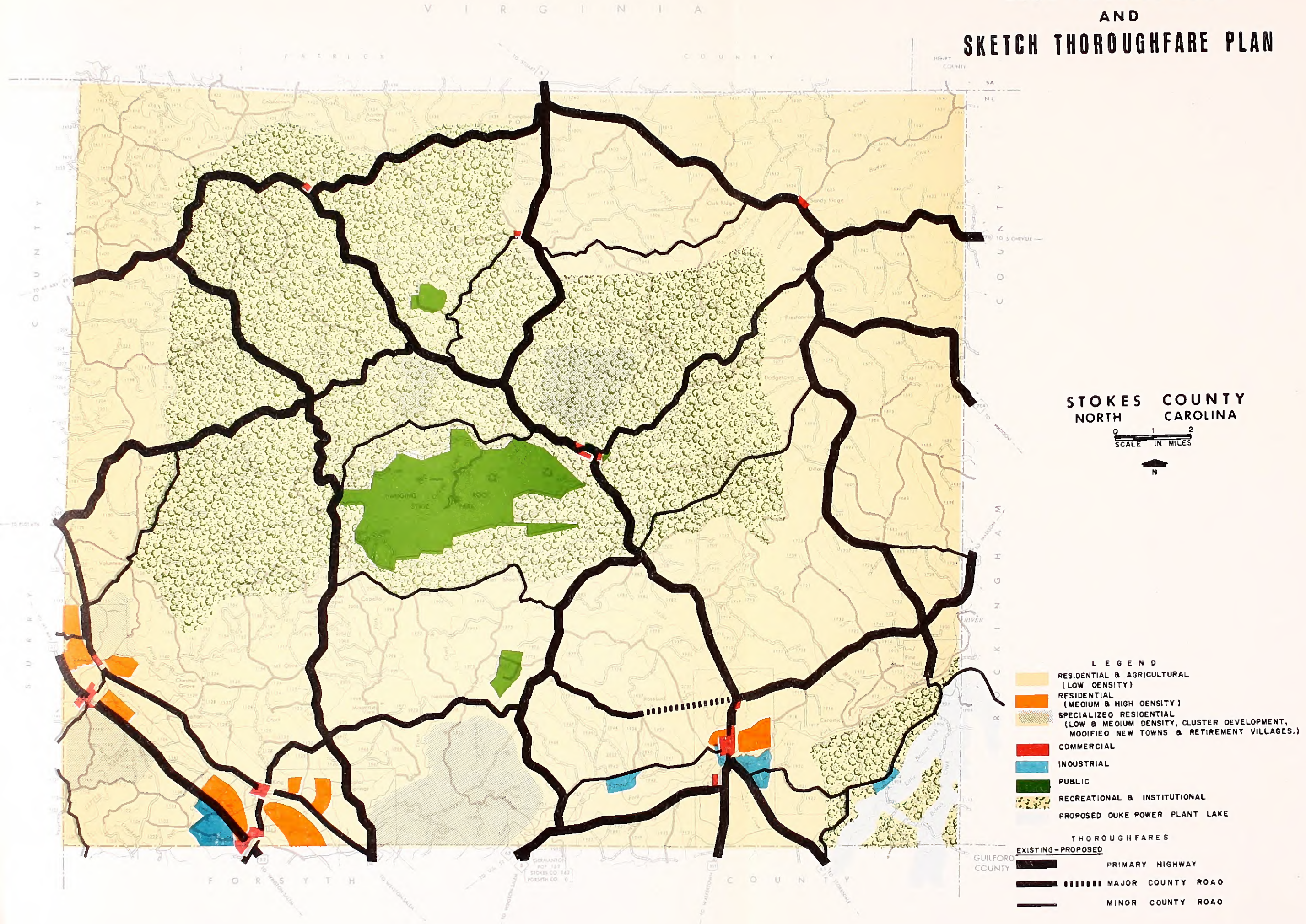
The cutting of timber will continue, although increasing prices of land in the county make the devotion of new areas specifically to timber production uneconomical in most cases. On the other hand, the reforestation of idle lands for soil conservation and recreational purposes, as well as the possible creation of large Christmas tree and nursery crops, would be of definite benefit to the county and its economy.

INDUSTRIAL ELEMENT

Examination of the qualitative land development factors applicable to industrial development show the industrial use to be perhaps the most exacting and demanding. This type of development in Stokes County will be contingent to the greatest extent upon the availability of water and sewer systems, as well as access characteristics and the availability of reasonably priced industrial sites.

Because of the development factors involved, heavy (intensive) industrial land use can only be recommended for the King and Walnut Cove areas at this time. The makings of an excellent industrial park are available adjacent to US 52 outside King

LAND DEVELOPMENT AND SKETCH THOROUGHFARE PLAN



MAP-9

and fulfill all qualitative requirements with the exception of a sewer system. Until incorporation is approved and a sewer system can be constructed in King, the industries choosing to utilize this site will be limited by that deficiency, although a large enough industry will install its own treatment facilities if a nearby stream can be reserved for disposing of the effluent. A sewer system is already under construction at Walnut Cove, but a problem of somewhat limited primary road access to Walnut Cove, as well as the expense involved in the provision of necessary 12" water mains, will continue to hinder industrial growth in that locality until corrected.

A potential for light industrial growth exists in the northern portion of the county (around Francisco, Lawsonville and Sandy Ridge) for industries without any significant liquid waste disposal problems, and without a requirement for a large or continuous supply of water. The creation and gradual implementation of selected area county water and sewer systems would not only result in the staged provision of these services with a minimum duplication cost, but would also radically improve the industrial potential of northern Stokes.

Prime industrial sites in the county can further be protected by the early acquisition of options by the county's two industrial development corporations, in addition to the protection afforded through selected-area county zoning. In order to fully realize the industrial potential of Stokes County the simultaneous improvement of education, water and sewer facilities must be undertaken soon.

RESIDENTIAL ELEMENT

Various types of residential potential occur throughout most of the entire county. The existing evenly spread residential land use pattern occurs almost entirely on existing road frontages, and as discussed in the Land Potential Study, a better use needs to be made of land off the existing roads. If this is done, Stokes can anticipate most of its residential development to continue to occur along existing roads, but in relatively small (5 to 20 housing unit) subdivisions.

With reference again to the qualitative land development factors, the most concentrated residential development can be expected (and is recommended) to occur on sites served by the Walnut Cove water and sewer system and within the present King water district. Multi-family housing is recommended for Walnut Cove, and also for King upon completion of a proposed sewer system there (dependent on incorporation).

For the rest of the county, development should occur along secondary roads on one acre or larger lots. This growth will by its very nature be "scattered" and occur at random throughout the county. Subdivision development beyond municipal sewerage systems will be restricted to those areas in which septic tanks can be accommodated. This is a problem in Stokes only in the foothills, mountains, and river bottoms.

Other developments should be large, estate-type (two acres and larger), or the more conventional (one-half acre or less) lot utilizing individual or group packaged waste treatment plants. These will tend to develop in close proximity to industries, commercial concentrations and/or schools. Access to major roads will also be an attracting factor. The southern half of the county should benefit by residential growth as a result of those persons who move into the county, but continue to commute out to jobs in Winston-Salem and Greensboro. This growth will be felt (and already exists) to a somewhat lesser degree in the northwest and northeast portions of the county with homes for outcommuters to Surry and Rockingham Counties, respectively.

A number of other specialized housing opportunities exist within Stokes, including the development and site potential for a planned "new town" to the west of US 52 near Pinnacle. There is, in addition, the potential for one or more planned retirement villages on land north of Danbury, in the vicinity of the County Hospital. (See further discussion of this in the climate section of the Land Potential Study.)

Present land use and open space characteristics indicate a strong potential for vacation homes throughout the county and especially in the prime recreation areas in the vicinity of Hanging Rock State Park. Although some soil suitability for septic tanks must exist for vacation homes, these seasonally occupied dwellings do not usually require quite as high a classification of soil permeability.

Mobile home sites and parks in the county are for the most part well sited and landscaped, but both new and existing should be carefully checked for compliance with sanitary and health regulations.

In the matter of price range availability, it is felt that high ($30,000 and over) and middle ($12,000 to $30,000) range housing availability is not as serious a problem at present as that represented by low ($8,000 to $12,000) housing availability. High income housing on tracts of two acres or more is normally constructed upon demand, although high income housing tract development should have a future in the county. The construction of middle-income single-family units is taking place faster than any other type at this time, but it should be pointed out that there is little or no surplus of middle-income housing. Single-family middle-range rentals are almost completely unavailable, as are multi-family units (see Housing Chart, Land Potential Study).

The most serious housing problem in Stokes is providing low income housing opportunities. It would seem that the best location for low income housing would be in the southern portion of the county, taking into consideration the need for proximity to water and sewer, governmental services, and employment. There are a number of alternative methods of attacking the problems, and as many methods as possible should be used in order to make a maximum impact upon the low income housing situation:

1. A housing authority is in the process of being formed in Walnut Cove, the prime locational site for low income housing at this time, and the only incorporated town in the county with the means for fulfilling Federal Workable Program requirements. There is a potential here for 40 to 50 units of low income housing within the next two to three years.

2. The great potential value of Farmers Home Administration Housing Programs, and the difficulties involved with their application to low income families have already been discussed in the Land Potential Study. In order to relieve the processing and staffing difficulties, and therefore immediately increase the number of low income housing loans, it is strongly recommended that a full-time housing aide be funded by the Stokes Community Action Program and be assigned full-time to assisting FHA personnel and low-income families in completing the preliminary steps leading to loan application approval. This includes application preparation help, family budgeting, site selection, and preparation of construction details planning.

3. With existing Farmers Home Administration (FHA) programs, and with the help of the Stokes Community Action Program (SCAP) and the housing aide, private non-profit (perhaps church-related) groups within the county could be approached to assist with the following program:

   a) SCAP housing aide helps 8 to 15 low income families obtain approval for low income housing loans.

   b) Community group selects a site and obtains FHA approval for location there of the authorized low-income homes.

   c) Community group then approaches a local private lending source for funds to acquire a site and prepare it for location of the homes. Since both the loans, which technically include money for site acquisition and preparation and the site itself, have already been approved by FHA, this is a defacto Federally insured loan. (This point has been verified and preliminarily approved by local FHA and private lending source personnel.)

   d) Community group purchases site, and proceeds to improve it with necessary streets and grading. Water distributed from a single well and sanitation facilities would be paid for, at least in part, by a Community Action Program incentive grant.

   e) Site sold to low-income families, and money repaid with interest to local lending sources.

   f) During this process the SCAP housing aide has rendered administrative assistance to the community group and the low-income people with application procedure and family budgeting help, site preparation and home construction details; including plans, prices and specifications.

4. Since improved residential land utilization has already been singled out in these reports for attention in Stokes County, there is every indication that non-profit groups within the county would be eligible for Farmers Home Administration rural renewal program loans as authorized under FHA Instruction 445.1. This program has a high long-range potential for improving residential land utilization and low-income housing outside of the incorporated towns of the county.

5. Stokes' present estimated population of 26,700 disqualifies it for county housing authority consideration under a North Carolina Enabling Act requirement of 60,000. However, the Home Rule Bill approved by the North Carolina Legislature gives counties the implied power to enact housing codes. Serious consideration should be given to formation (along with Surry, Davie and Yadkin Counties) of a multi-county housing authority.

PUBLIC AND INSTITUTIONAL ELEMENT

Public land use throughout Stokes County will be discussed in detail in the forthcoming Community Facilities Plan and Public Improvements Program. However, it should be pointed out that inadequate jail and court facilities, and a resulting scarcity of office and parking space are facing the county and must be planned for and dealt with without delay.

It is tentatively assumed that the County Seat of Danbury would be the best location for these additions to public facilities, considering its relatively central location, and the investment in public facilities already located there which the county can ill afford to lose. However, this conclusion also assumes secondary road system improvement in the relatively near future to improve access to Danbury from the populous southwest (King and Pinnacle) portions of the county.

Considering the availability of a site across the street on the east side of the Courthouse, it may prove financially feasible to free space in the Courthouse for courtroom and office expansion, through construction of a new jail with Sheriff's and other office space. Since parking is also a critical problem in Danbury, additional parking space might also be provided by constructing the proposed building on a concrete platform at street grade level, while the open space below the platform, created by the down-slope of the property away from the street, is used for parking space. Further, office space is potentially available in the renovation of the vacant Danbury Elementary School, if proved financially feasible. Any new construction should preserve the present character of Danbury for tourism purposes, and further additions should not be made to the Courthouse itself, thereby using up the little remaining landscaped space around it.

Institutional land use provides an important potential for Stokes County future development. The character of the county's open space, and especially that of the prime recreational area, makes an excellent opportunity for the location of institutional, educational, industrial, and church-related camps and retreat centers within Stokes. A number of these already exist, including Camp Robert Vaughn (Boy Scouts of America), near Walnut Cove, a YMCA camp on the south slope of Sauratown Mountain, Vade Mecum Episcopal Camp near Danbury, the Susan Barber Jones Presbyterian Camp near Francisco, and others.

Institutional uses feasible for location in Stokes include special purpose hospitals, youth centers, and educational as well as industrial conference centers (such as the one near Greensboro). This type of activity would add to commercial income and at the same time increase tourist traffic in the county.

RECREATION AND TOURISM ELEMENT

The basis for the distribution of this type of land use in Stokes County is the concept of a prime recreation area discussed in the introduction of this section. It does not in any way rule out the location of recreation and tourism land uses in areas outside the recreation area. On the contrary, it should encourage their establishment throughout the county, and tie in directly with development of Duke Powers' Belews Lake commercial recreation facilities.

Recreation facilities for the use of Stokes County residents will be discussed in detail in the Community Facilities Plan and Improvements Program. It can be assumed at the present time, however, that the picnic and bathing facilities at Hanging Rock Park (utilized on a regional basis) are inadequate for the needs of the residents of the county. Also, in addition to outdoor recreational facilities, there is an overall growing need for more recreation facilities and programs for all ages, whether they are located in churches or in community centers.

The key factor in Stokes tourism potential lies in the fact that the county's mountains, foothills, and forests are situated within easy access of the Piedmont Crescent to the south, and the Northeastern United States Megopolan Corridor (New England to Virginia) further northward. Therefore, not only regional recreational needs but national tourism implications become forces on which to pattern Stokes' tourism development.

Initially, the objective should be to draw regional tourist traffic. Part of the battle is already won as evidenced by the location of the Skyline Drive to the north, Pilot Mountain State Park to the west, and the reportedly high percentage of midwest-to-Florida traffic on Route 52. Just as significantly, North Carolina's trunk highway system is attracting more camper-trailers each year.

Visitors will be drawn even closer to the prime recreation area by the proper utilization of highway commercial land around the two US 52 interchanges in Stokes County and Stokes' portion of the land adjacent to the Pilot Mountain interchange, just over the line in Surry County. More specifically, this involves the reservation and protection of the land around these interchanges through options purchased by the Industrial Development Corporations, and even possibly by zoning controls for motels, restaurants and similar uses.

The next step involves the private development of camp-trailer parks and attractive rental vacation homes. At the same time, private development of vacation homes in the county should be strongly encouraged. Once people are attacted and have a place to stay, there must be somthing for them to do -- whether they are transients or whether they are expected to spend an entire summer season in their vacation home. It would seem to be within the capability of the county to create a number of "doing and seeing" attractions. The list of "doing" attractions includes the usual baseball, softball, golf, swimming, etc. Uniqueness, however, must be sought. Stokes must have something that other places do not have. One such measure might be the creation of a complex of riding and hiking trails throughout Hanging Rock Park and the rest of the heavily forested foothills in the planned recreation area.

"One shot" attractions, such as Shepherds Mill and a possible farmers museum fall into the "seeing" category. Certainly, the development of historical sites also fits here, and the Historical Society in partnership with county government should make every use of State and Federal funds for the acquisition of these sites and the development of "doing and seeing" activities at them. Also, Department of Agriculture and Farmers Home

Administration funds are available to aid in the conversion of agricultural land to recreational use. Stokes' high school youth could be involved in each project during the summer.

Danbury itself has the potential for becoming the center of this tourist and recreation area. Located in the heart of the prime recreation area, the addition of carefully regulated commercial facilities would make it a natural tourist attraction, in view of its picturesque character typified by the Courthouse and the old hotels. The old Taylor Hotel could be made into an outstanding museum. Completion of the proposed Danbury Iron Forge Park would add further to the potential.

In addition to the appointment of a County Recreation Committee and the other steps mentioned in regard to the establishment of a recreation district, it is strongly recommended that the Planning Board and the County Commissioners contract for a separate recreation and tourism plan, which would also examine the protection and renewal of Danbury.

COMMERCIAL ELEMENT

Development of highway commercial land around the US 52 interchanges has already been discussed, and the potential for regional shopping facilities on these sites should be emphasized. This is, in fact, already happening at King with the enlargement of the Town and County Restaurant and the construction of a large furniture store. Stokes' two US 52 interchanges lend themselves to this use by virtue of their location -- just about half way between Winston-Salem and Mount Airy.

There is a present potential for more specialized restaurant facilities in the area generally accessible from US 52. This supposition is further confirmed by the successful regional attraction of certain Mount Airy and Ashe County restaurants, as well as that of the Polyrosa Restaurant just across the line in Surry County. As recreation and transportation facilities develop, restaurants will become a more lucrative use in the interior sections of Stokes. A number of excellent locations exist, including, for example, the old Spencer Mills and dam on NC 89 at the Big Creek bridge, in the northwestern corner of the county.

Qualitative land development factors for local commercial development can be noted in Tables 7 and 8. The locations with the greatest local potential are King, Walnut Cove, Sandy Ridge, and Lawsonville. In the northern portions of the county, new commercial concentrations (small shopping centers) should be designed with both local and recreational/tourism uses in mind.

The problem of renewing the central business district at King is one that will eventually have to be faced. Parking and traffic difficulties are discussed in the transportation element, but the merchants here are also faced with the increasing commercial building blight, competition from more modern shopping facilities nearer the US 52 interchange, lack of expansion room, and poor sanitary facilities. Incorporation of King is not only essential to speed the installation of a sewer system, but also to begin planning for the continued life of the central commercial enterprises.

The King business district is at present built in such a way that one proposal for serious consideration might be the construction of parking and traffic circulation around its periphery, and the subsequent conversion of its main street to a pedestrian shoppers mall.

TRANSPORTATION ELEMENT

The first step in improvement of transportation in Stokes County should be the adoption of a county thoroughfare plan and subsequent improvements to major and minor county roads. (A thoroughfare plan is in the process by which improvements or new facilities are systematically conceived, listed as to present and future adequacy, and programmed for future construction.) The main advantage of the thoroughfare plan is that officials will be more aware of needed improvements and can schedule funds accordingly prior to the letting of the contract; damage to property values and community appearance can be minimized by informing the public of when and where improvements are to be made, thereby allowing them time to reschedule improvements, find new (temporary) routes, and so forth.

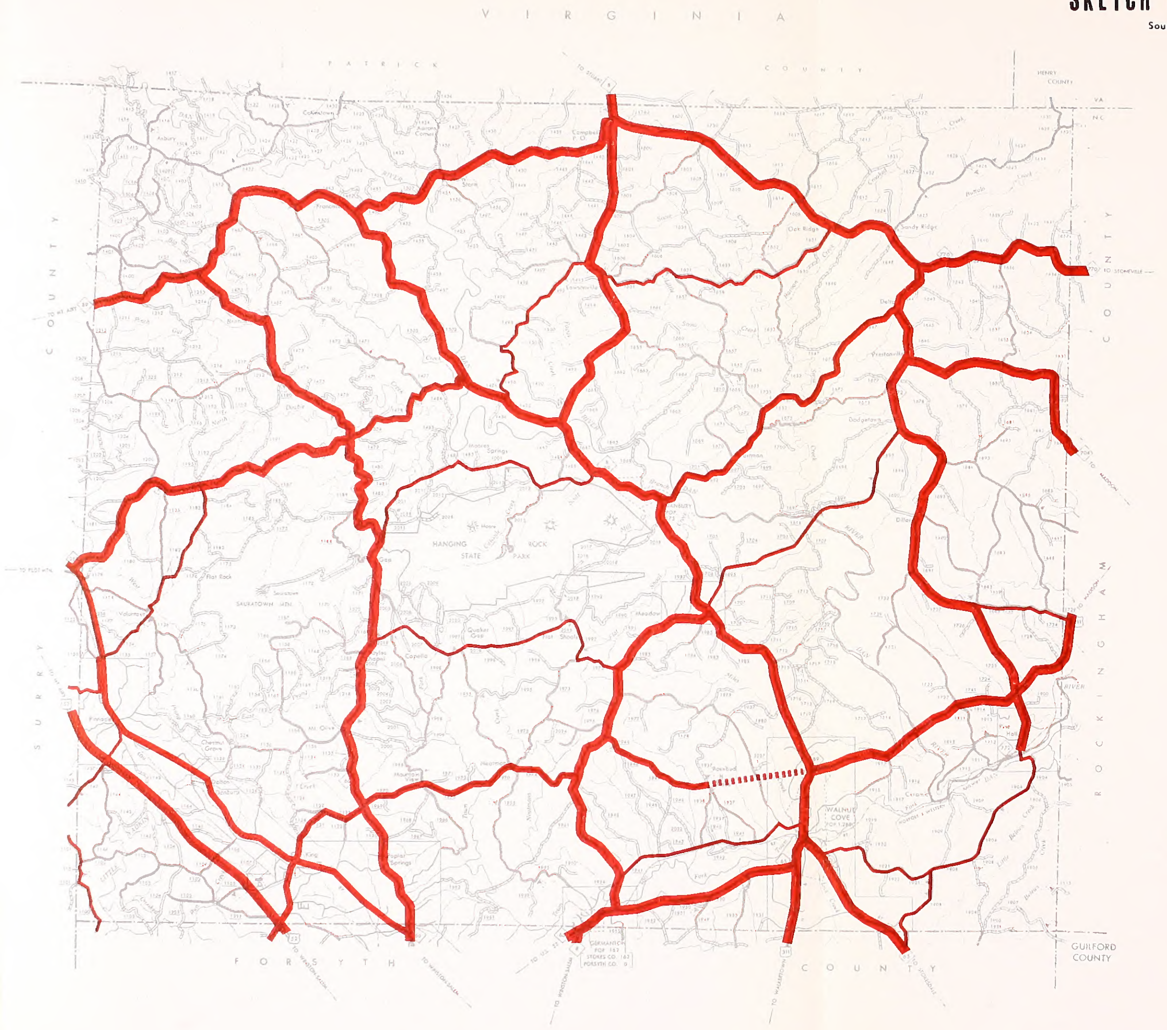
The recommendations are based on existing and proposed development patterns and general highway planning standards.

Three classifications of highways have been used in formulating the generalized county thoroughfare plan. They are primary highways (which connect population, economic and recreational centers, and are numbered NC or US); major and minor county roads (which interconnect economic, population and recreational centers within the county and adjacent counties, and carry traffic to the primary highway system).

The sketch thoroughfare plan shown in the left-hand column below has received preliminary approval of the State Highway Commission's Advance Planning Section. In the right-hand column is a separate listing of improvements to the roads recommended by the Stokes County Planning Board and the Division of Community Planning.

PROPOSED
SKETCH THOROUGHFARE PLAN

Source: N.C. Highway Commission



STOKES COUNTY
NORTH CAROLINA

0 1 2
SCALE IN MILES

N

L E G E N D

EXISTING–PROPOSED

▬ PRIMARY HIGHWAY

▬ ▮▮▮▮▮▮ MAJOR COUNTY ROAD

— MINOR COUNTY ROAD

MAP-10

THOROUGHFARE PLAN

1. Primary Highways

US 52. Built to interstate standards, US 52, connecting Mount Airy with Winston-Salem, crosses the southwest corner of Stokes and is the primary traffic generator for the county. Two interchanges exist within the county, the first at King on the Forsyth County line, and the second at Pinnacle. However, future planning must consider the Pilot Mountain Road interchange, lying just across the border into Surry County, as having significant future influence on Stokes' traffic circulation.

US 311 serves a primary purpose of connecting Madison with Winston-Salem, but in fact acts as a rural collector carrying several different types of traffic as it passes through Stokes County. Its link from the county line to the intersection with NC 65 carries mostly commuter traffic from the Winston-Salem and Greensboro areas. As the highway passes through Walnut Cove it attracts traffic from NC 65 (east-west), SR 1941 (east-west), and NC 89 (north-south). It also serves as the main street of Walnut Cove, and it is at that point that its greatest traffic volume occurs. Traffic volumes along its length between Walnut Cove and Rockingham County line show a decrease near the center point. Since this decrease does not occur at any road intersection, it must be assumed that the western portion of this road near Walnut Cove is carrying southbound traffic, while the eastern portion is carrying commuters into the Madison area.

RECOMMENDED IMPROVEMENTS

The most dangerous point on US 311 occurs at its intersection with NC 89. Road right-of-way at this location has merged into the property of a service station on the north side of the intersection. This causes eastbound traffic turning left from NC 89 into US 311, and northbound traffic turning right from US 311 into NC 89, to make a 270° turn. At this point the right-of-way should be reclaimed and remarked to allow for a safer turn.

THOROUGHFARE PLAN	RECOMMENDED IMPROVEMENTS
NC 8 is the central north-south route through the county, connecting Winston-Salem and Stuart, Virginia. For two-thirds of its route it is a well-engineered road and serves as the primary traffic artery for the County Seat of Danbury.	In order to open up the central and northern portions of the county for future development, it is essential that portions of this road be straightened between SR 1987 and the Shoal Creek bridge; and between SR 2018 and the Dan River bridge at Danbury. Right-of-way for this purpose may already exist. NC 8 also needs to be straightened between SR 1488 and SR 1487, and between NC 89 and a point just north of SR 1493 -- both sections located north of Danbury.
NC 65 leaves a joint route with NC 8 just east of Germanton, travels east and the north into Walnut Cove, then doubles back to move southeastward. Its primary purpose could best be described as connecting Walnut Cove with NC 8, and eventually with Winston-Salem in Forsyth County.	
NC 66 moves north-south commuter traffic from the Winston-Salem area through the Boyles Chapel-Capella section south of the mountains. It then serves as the only north-south road crossing the Sauratown Mountain Range. Above the mountains it continues on to eventually connect with NC 89.	
NC 89 from the Surry County Line to an intersection with SR 1467 completes a major east-west route across the northwestern part of the county. After intersecting with NC 74 near Francisco, NC 89 assumes its second purpose of providing a northwest route into Danbury. Further south it enters its dual route with NC 8 to provide the primary southeast link between Danbury and Walnut Cove.	Straightening is needed from SR 1404 to SR 1212, with the exception of three-tenths of a mile between SR 1401 and SR 1403.

NC 704, for three-quarters of its length between the northern section of NC 89 and its intersection with NC 772, provides the only major east-west route across the northeastern part of the county. For the final quarter of its length it connects the northeastern portion of the county with Madison and Rockingham County.	
NC 770 provides a traffic link between the Sandy Ridge area and northern Rockingham County.	
NC 772 is probably one of the best roads in the county, and at this time carries very low traffic volumes. If any industrial development is to take place in the Sandy Ridge area, this is the only feasible route on which trucks will not seriously interfere with traffic flow as they move north-south between the Winston-Salem-Greensboro area and the northeast portion of the county.	It should be designated a truck route and continued across the new bridge at Pine Hall to follow the course of SR 1908 across the Forsyth line southeast of Walnut Cove.
NC 268 will eventually connect the northern and central portions of the county with the Pilot Mountain and Pinnacle interchanges of US 52. It is important to future development in that it will provide the northwestern section with a beltway around the mountains, along which access to all parts of the county can be achieved with a minimum of road construction. SR 1504 should become part of NC 268 to complete its link to junction with NC 89.	Realignment should be programmed for the eastern half of the section between SR 1187 and NC 66. Future realignment, if at all possible, should take place between NC 66 and NC 89.

THOROUGHFARE PLAN

2. Major County Roads

SR's 1128, 1132, 1131, 1970 and 1974, provide the only feasible routes to carry traffic from King to Danbury, across the southern part of the county from NC 8 and from King to Walnut Cove.

SR 1236 carries local traffic between points along a route from Pilot Mountain, in Surry County, through Pinnacle and King, to Rural Hall in Forsyth County.

SR 1504 should be renumbered as part of NC 268 to connect to NC 89 as part of the mountain beltway.

SR 1112, providing access between the King business district and the US 52 interchange, is now in the process of being widened.

SR's 1652, 1674 and 1647 form the only traffic route between Danbury and the northern section of the county.

School bus traffic from South Stokes High School to the eastern part of the county could be much facilitated by the construction of a new road continuing SR 1944 from Rosebud east, to link up with US 311 at its intersection with NC 89.

3. Minor County Roads

SR 1001 serves as a major access to Hanging Rock State Park.

RECOMMENDED IMPROVEMENTS

Should be upgraded to primary road status. Realignment, widening, and repavement are recommended at a number of locations along this needed major traffic route.

SR 1151 and SR 1152 will carry Pilot Mountain interchange traffic between US 52 and SR 1236. SR 1151 is already in the process of major improvement.

SR 1154 and SR 1182 from the western portion of the mountain traffic beltway, carrying traffic from the Pinnacle area around the northern side of the mountains to Danbury.

SR 1147 serves the Pinnacle interchange of US 52 and is continued with SR 1100 and SR 1101 into Surry County, and finally back into the extreme southwest corner of Stokes.

SR 1496 and SR 1651 are added as minor county roads since they will provide more direct access to North Stokes High School.

SR 1941 handles traffic to and from the R. J. Reynolds plant at Walnut Cove.

SR 1729, SR 1904, SR 1921, SR 1695, and SR 2019-1973 are other secondary roads added to the plan by the Advanced Planning Section of the State Highway Commission as minor county roads, because of the functions they presently serve.

SR 1152 should be widened between SR 1151 and the SR 1154 intersections, in order to carry traffic around Pinnacle and northward into the county without building an additional railroad crossing.

Access to North Stokes High School would be considerably improved by paving and connecting SR 1502 with SR 1499 to the west of the school, and SR 1501 with SR 1493 to the east. These would be considered local access roads, according to the Advanced Planning Section of the State Highway Commission.

SR 1918 has been improved considerably and should be marked as bypass to carry traffic to the east of the Walnut Cove central business district.

Industry near King is locating in an industrial park pattern on vacant land to the west of US 52. Access to the service road from the SR 1112-US 52 interchange is confusing and dangerous to those not familiar with it. Also, a number of prime industrial sites could be made available by extending the service road .4 mile along US 52 at the point where SR 1105 overpasses US 52.

Directional Marking

Roads in this sketch thoroughfare plan should be better marked for the convenience of the out-of-county visitor. In order to be properly oriented, each road should be marked, in the direction toward the county's interior, with destinations and distances of other primary roads and the large towns. In a direction outward-bound from the interior of the county, the roads should be marked with destinations of major cities (Winston-Salem, Greensboro, Madison, Mount Airy), as well as the US highways 52 and 311.

Parking and In-Town Congestion

Most of King's traffic problems result from congestion along SR 1127, the town's main street. It is therefore recommended that King provide off-street parking facilities after incorporation takes place (probably on property north of the central business district, adjacent to the railroad tracks), and that as soon as this is accomplished, parking should be prohibited along both sides of SR 1127.

US 311 through the Walnut Cove central business district carries a relatively high traffic load, but it is wide at this point and the problem is only noticable during peak commuter hours. If the recommended NC 772 truck route is designated to the east of Walnut Cove, this should help prevent future traffic congestion. In the event that traffic congestion should become too much of a problem in Walnut Cove, there are a number of alternative routes that would provide bypasses, but this is not necessary at this time.

GENERAL AVIATION

Industrial development in the King area would benefit from county support and ownership of a general aviation airport to the west of US 52. If such an airport were to become a reality, it would probably be built without expense to the county. Present estimates indicate that Federal, Appalachian, State and private funding would cover the cost of construction; however, operating expenses might require county assistance until airport revenues reach the self-sustaining level.

Q. IMPLEMENTATION

Stokes County's Land Development Plan cannot guide future growth until active implementation is initiated and maintained. Proper use of available tools can help achieve this process. The more significant are summarized below.

ZONING

Protecting private property, fostering compatible land uses, and encouraging economic development are the main purposes of zoning. A proposed selected area zoning ordinance under contractual agreement will be prepared, and it is hoped that an ordinance will be adopted and enforced since protection of the property owner is so critically involved. This cannot be done without full public and private encouragement and support.

SUBDIVISION REGULATION

These regulations set standards for lots, roads, building setbacks, the drawing of plats, etc., in regard to land to be subdivided for residential use. It is recommended that these regulations be adopted by the county and be conscientiously administered.

IMPROVEMENTS PROGRAM

Needed capital improvements under this program can be scheduled over the twenty-year comprehensive planning period. An advantage resulting from such programming includes foreseeing needed capital expenditures and formulating financial plans in advance of actual project need. This facilitates the maintaining of a relatively consistent tax rate as opposed to a sudden and sometimes drastic tax increase. Included in this would be recommendations for the establishment of a "capital reserve" fund to finance long-range improvements. The improvements program would be associated with a short-range (five-year) Capital Improvements Budget, and eventually be a key part of U. S. Housing and Urban development certification.

OTHER TOOLS

All elements of the comprehensive planning program, in particular the Land Development Plan, should be (after formal adoption) periodically reviewed and revised as conditions warrant. This review should enable County Commissioners to seek all possible assistance in implementing the Plan's recommendations. The review should be made by the Planning Board and incorporated in its annual report to the County Commissioners, giving information regarding conditions of the county and any plans or proposals for the development of the county, and estimates of the costs involved.

The county's proposed thoroughfare plan should be adopted by the County Commissioners and the N. C. Highway Commission at the earliest possible date. Determination of new and improved routes will facilitate preparation of developers' plans both for public and private enterprises -- e.g., schools, shopping centers, industrial complexes, subdivisions, etc. This element too should be periodically reviewed, and if necessary, revised to reflect changing conditions.

Not all of the means for plan implementation can be listed here. Many federal programs such as FHA grants for water and sewer facilities are available for major county projects. Other programs that should be investigated include assistance involving community renewal and rural renewal programs, solid waste (garbage) disposal facilities, and open space acquisition for parks, conservation and historic properties. Aid from private groups should be enlisted also, such as community development organizations, the School Board, and Farm and Home Demonstration Groups -- all of which could provide much help in implementing portions of the overall plan in their particular locality. Private enterprise should also be requested to help county planning efforts in reference to such developments a s shopping centers, planned housing developments, and industrial parks.

The building code recently adopted by the county is a good example of a development planning tool which will be invaluable in the future. In view of the Home Rule Bill just passed by the 1969 Session of the General Assembly, there is a strong probability that the County Commissioners will be empowered to pass a housing code ordinance. Along with the general upgrading or elimination of substandard housing which would result from a housing code, it would also make Stokes eligible to participate in a multi-county housing authority and have a Workable Program certified by the U. S. Department of Housing and Urban Development.

CITIZEN PARTICIPATION

This is probably the most important implementation tool listed. An informed public is more willing to support growth and development programs -- whether in their neighborhood or in the county. Stokes County officials should begin immediately to see that the public is informed about planning efforts. A major step in this direction would be the formal adoption of the Land Development Plan by the Board of Commissioners. This would also lend greater future weight to the plan in its practical application to the development of the county.

PRIORITY PROGRAM

1. Formal adoption of the Land Development Plan and Thoroughfare Plan by the Stokes County Board of Commissioners.
2. Active support for the incorporation of King.
3. As soon as the Community Facilities Plan and Improvement Program are completed, consider adoption of capital budgeting to work towards completion of a countywide water and sewer program (with priority for water areas 3 and 4 as recommended in the Gray Water and Sewer Report), as well as a reserve fund for future land acquisition and option.
4. Adopt and enforce a selected-area zoning ordinance.

5. Adopt and enforce countywide subdivision regulations.

6. Begin an active planning education program throughout the county through the newspapers and by means of talks to community groups and in schools. Also, regularly and systematically invite citizens from various sections of the county to meet with the Planning Board for advisory purposes.

7. In addition to the protection of prime industrial sites through zoning, reserve land for industrial use through options acquired by the Development Corporation. Site protection and option reservation should also be extended to recreation and institutional land uses under the theory they are now very definitely a part of the economic development for the county. This would involve acquiring or optioning scenic overlooks, historic sites, and possibly a wildlife sanctuary; using State, Federal, and private funding. A non-profit corporation might be set up for this purpose, or the existing Development Corporations might be interested. Historic sites should be actively developed in conjunction with the Historical Society and youth groups.

8. Encourage and if possible aid low income housing construction efforts by private and non-profit developers, the Stokes Community Action Program, the Farmers Home Administration, and the proposed Walnut Cove Housing Authority.

9. Create a county recreation commission to initiate and supervise a county recreation and tourism program. The Planning Board and County Commissioners should also contract for a recreation and tourism plan, which would also include provisions for the renewal and preservation of Danbury as the center of the prime recreation area.

10. In order to prevent spoiling the natural character of the prime recreation area through the unwise use of natural resources, and to guard against the development of a "honky-tonk" atmosphere, strict land use controls will have to be applied by the county government. As soon as practicably possible, zoning controls, subdivision regulations, and historic site preservation measures should be applied. These would be administered not only through the advise of the County Planning Board, but also through the guardianship of a County Recreation Committee. In the long run, a large park area (with public and private ownerships involved) would result, in which intelligently guided private enterprise could function to vastly benefit the rest of the county.

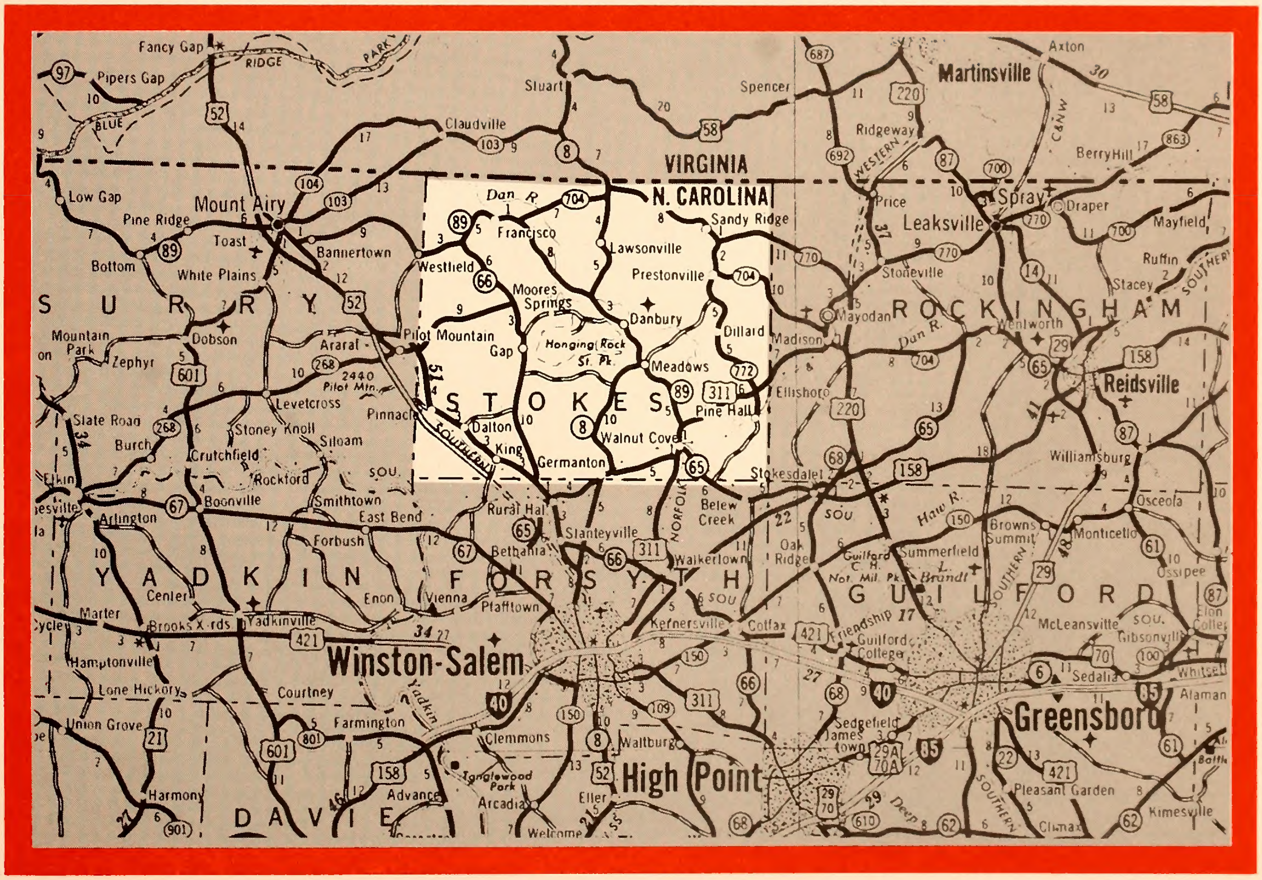
11. Seek out and actively encourage location of public facilities such as special service hospitals, youth center, and research facilities in Stokes County. This should attract residents and increase commercial activity in the same manner as the location of industry in the county will.

12. Maintain contact with the Department of Conservation and Development, Division of Commerce and Industry, to promote, locate, and finance diversified industrial development. Creation of an Economic Development Commission to coordinate efforts of the two Industrial Development Corporations and the Recreation Commission, would aid in the identification and protection of prime industrial, recreation, tourism, and institutional sites through zoning recommendations, purchase and/or option.

13. When a stronger pattern of recreational use has actually developed later in the planning period, provide zoning and development controls to insure the preservation of the character of recreation areas, historic sites, and related commercial sites.

14. When current 701 planning contracts are completed, apply for Federal funds to retain the Division of Community Planning in an advisory and assistance role.

15. As soon as the county is financially able, employ full-time planner who can also act as a development officer for Stokes. This would not only help assure future development supervision, but will also provide a paid leader for the work of the economic developers.



VIRGINIA
N. CAROLINA
S U R R Y
S T O K E S
R O C K I N G H A M
Y A D K I N
F O R S Y T H
G U I L F O R D
D A V I E
Martinsville
Mount Airy
Winston-Salem
High Point
Greensboro
Reidsville
Leaksville
Spray
Danbury
Walnut Cove
King
Pine Hall
Germanton
Lawsonville
Francisco
Westfield
Moores Springs
Pilot Mountain
Sandy Ridge
Prestonville
Dillard
Meadows
Dalton
Hanging Rock St. Pk.
Dan R.
Stokesdale
Madison
Mayodan
Stoneville
Wentworth
Williamsburg
Yadkinville
Kernersville
Walkertown
Rural Hall
Bethania
Stanleyville
Clemmons
Dobson
Claudville
Stuart
Spencer
Ridgeway
Axton
Draper
Mayfield
Ruffin
Summerfield
Colfax
Oak Ridge
McLeansville
Sedalia
Pleasant Garden
Jamestown
Sedgefield
Advance
Farmington
Courtney
Boonville
East Bend
Pinnacle
Siloam
Toast
White Plains
Low Gap
Pine Ridge
Fancy Gap
Pipers Gap

APPENDIX

Appendix 1 1910 to 1960 Population for Comparison Counties

Area	1910	1920	1930	1940	1950	1960	Average Per Cent of Change 1910-1960
Stokes County	20,151[1]	20,575[1]	22,290[1]	22,656[1]	21,520[1]	22,314[1]	
Per Cent Change		2.1	8.3	1.6	-5.0	3.7	2.1
Surry County	29,705	32,464	39,759	41,783	45,593	48,205	
Per Cent Change		9.3	22.4	5.1	9.1	5.7	10.3
Forsyth County	47,311	77,269	111,681*	126,475	146,135	189,428	
Per Cent Change		63.3	44.5	13.2	15.5	29.6	36.8
Rockingham County	36,442	44,149	51,083	57,898	64,816	69,629	
Per Cent Change		21.1	15.7	13.3	11.9	7.4	13.9
Yadkin County	15,428	16,931	18,010*	20,657	22,133	22,804	
Per Cent Change		9.7	6.4	14.7	7.1	30.0	8.2
State of North Carolina	2,206,287[2]	2,559,123[2]	3,170,276[2]	3,571,623[2]	4,061,929[2]	4,556,155[2]	
Per Cent Change		16.0	23.9	12.7	13.7	12.2	

Source: 1/ Population of Counties and Minor Civil Divisions, 1910-1960, Piedmont Subregion of North Carolina, Division of Community Planning, Raleigh, N.C. Publication dated January, 1962.

2/ 1960 U.S. Census of Population, General Population Characteristics, N.C. Table 17, pg. 35-41.

*Footnote: 1920-1930 - Little Yadkin Township (1920 population 447) of Yadkin County annexed to Lewisville Township, Forsyth County, in 1927.

Appendix 2 1960 Population Age Groups by Comparison Counties

	Stokes County	Surry County	Forsyth County	Rockingham County	Yadkin County	State of North Carolina
Total Population	22,314[1]	48,205[1]	189,428[1]	69,629[1]	22,804[1]	4,556,155[2]
Median Age	26.7	27.6	27.3	28.1	28.2	25.5
Non-White Population	2,269	2,807	45,768	14,672	1,130	1,156,870
Median Age	18.4	21.4	24.4	21.4	21.7	19.5

Source: 1/ 1960 U.S. Census of Population, N.C. General Population Characteristics, Table 27, p. 35-98.
2/ Same as above, Table 17, p. 35-41.

Appendix 3 Education in Stokes County Compared with Surrounding Counties, by Per Cent of Population

County	8 Yrs. or Less of Schooling 1950	1960	Completed High School 1950	1960	4 Yrs. or More College 1950	1960	Median Years of School 1950	1960
Stokes	73.5	62.9	2.8	15.7	1.7	2.1	7.1	7.8
Forsyth	51.4	42.1	13.8	22.9	6.6	9.0	8.7	10.3
Rockingham	67.8	59.2	5.1	15.3	3.4	3.9	7.4	8.0
Surry	66.1	59.2	6.3	17.0	3.5	4.2	7.5	8.0
Yadkin	71.5	60.3	4.2	16.7	2.4	2.8	7.4	7.9
State of North Carolina								8.9
United States								10.6

Source: U. S. Census of Population, 1960

Appendix 4 Family Incomes, Distribution and Percentage of Change, 1949-1950, as Compared with Surrounding Counties

County	Median Family Income 1959	Percentage Change 1949-1959	Percentage of Families in 1959 with Incomes: Under $3,000	Over $10,000
	(Dollars)		(Percent)	
Stokes	$3,240	75.6	46.	3.5
Forsyth	$5,549	101.1	20.1	13.1
Rockingham	$4,338	82.0	31.7	5.1
Surry	$3,717	79.1	39.0	5.1
Yadkin	$3,760	105.5	39.1	4.3

Source: Change, Agricultural and Economic Trends in North Carolina: The North Carolina Agricultural Extension Service, 1964.

Appendix 5 Family Income by Selected Areas, in Dollars, 1959[1/]

	Stokes County	Surry County	Forsyth County	Rockingham County	Yadkin County	State of North Carolina	United States
Mean Average Family Income	3,898	4,466	6,442	4,980	4,278	4,838	6,636
Per Capita Income	961	1,197	1,773	1,325	1,146	1,260	1,853

Source: 1/ Personal Income Statistics for N. C. Counties, 1949-1959 Department of Conservation and Development, Raleigh, N.C. Dated Summer, 1963.

Appendix 6

1959 Family Income by Minor Civil Divisions, Stokes County

	Beaver Island	Big Creek	Danbury	Meadows	Peters Creek	Quaker Gap	Saur-town	Snow Creek	Yadkin	Total County
All Families	491 1/	414 1/	147 1/	621 1/	384 1/	333 1/	861 1/	657 1/	1,625 1/	5,533 2/
Under $1,000	40	43	8	93	33	39	94	100	173	623
$1,000 to 1,999	65	92	31	120	88	90	143	146	228	1,003
$2,000 to 2,999	109	75	28	78	84	79	155	132	216	956
$3,000 to 3,999	110	62	16	82	47	59	111	82	200	769
$4,000 to 4,999	70	65	29	69	44	49	74	69	196	665
$5,000 to 5,999	46	28	10	46	46	4	97	61	192	530
$6,000 to 6,999	20	16	8	45	17	9	56	28	135	332
$7,000 to 7,999	15	25	4	23	12	4	59	4	82	228
$8,000 to 8,999	12		4	16	9		16	16	66	139
$9,000 to 9,999			9	8			7	17	56	97
$10,000 to 14,999	4	4		33	4		36		68	149
$15,000 to 24,999				8			8	4	13	33
$25,000 & over		4					5			9
Mean Family Income	$3,535	$3,667	$3,833	$4,021	$3,383	$2,671	$4,305	$3,203	$4,465	$3,898
Per Capita Income	$ 862	$ 841	$ 924	$ 918	$ 791	$ 641	$1,067	$ 822	$1,164	$ 961

Source: 1/ 1960 U.S. Unpublished Census, Special Table PH-3
2/ 1960 U.S. Census of Population, General Social and Economic Characteristics, N.C. Table 86, p. 35-283

Appendix 7 Stokes County Commuting Patterns, 1960

Areas in Mobility Pattern	Went Out of County to Work	Came into County to Work
Forsyth County	1,666	230
Guilford County	106	34
Rockingham County	564	60
Surry County	202	60
Yadkin County	4	4
Danville City, Virginia	5	-
Henry County, Virginia	17	6
Martinsville City, Virginia	37	-
Patrick County, Virginia	67	36
Elsewhere	51	-
TOTAL	2,721 (Out-Commuting)	430 (In-Commuting)

Source: U. S. Census of Population, 1960

Appendix 8 Employment by Industry, Stokes County, 1960

	Per Cent of Total Employed
Total Employed	100.0
Agriculture	39.4
Mining	0.2
Construction	5.6
Manufacturing	33.0
Furniture & lumber & wood products	3.2
Metal industries	0.3
Machinery	2.4
Transportation equipment	0.2
Other durable goods	2.4
Food & kindred products	1.1
Textile & apparel products	15.3
Printing, publishing & allied industries	0.4
Other nondurable goods	7.7
Railroad & railway express service	0.1
Other transportation	2.4
Communications and utilities & sanitary service	0.1
Wholesale trade	0.7
Eating & drinking places	0.6
Other retail trade	6.4
Business & repair services	0.8
Private households	1.8
Other personal services	1.4
Hospitals	0.7
Educational services	2.5
Other professional & related services	0.7
Public administration	1.9
Other industries (including not reported)	1.0
Finance, insurance & real estate	0.6

Source: 1960 U.S. Census of Population, N.C. General Social and Economic Characteristics, Table 85, p.35-275

Appendix 9 Industry in Stokes County, 1969

Carolina Division, United Elastic Corp., Westfield

Carolina Medical Electronics, King

Danbury Reporter, The, Danbury (printing)

Duke Power Co., Steam Generating Plant, Pine Hall (completion, 1974)

Franklin Mills Hosiery, King

Hastings Co., The, (auto parts)

Hedgecock Lumber Co., Walnut Cove

International Aero Salvage

King Lumber Co., King

King Times News Publishing Co., Inc., King (printing)

Pine Hall Brick and Pipe Co., Inc., Pine Hall (Plant #1)

Queen Manufacturing, King

Reynolds, R.J. Tobacco Co., Brook Cove Plant

Walnut Cove Hosiery Mill, Walnut Cove

Walnut Cove Veneer Corp., Walnut Cove

Source: Department of Conservation and Development, Division of Commerce and Industry, Nov., 1968

STOKES COUNTY

PRELIMINARY 1968 COUNTY COMMISSIONERS FARM CENSUS SUMMARY'

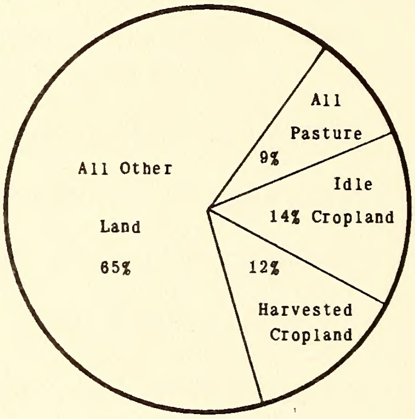
COMPILED AND RELEASED BY THE
N. C. AND U. S. DEPARTMENTS OF AGRICULTURE, CROP REPORTING SERVICE, RALEIGH, N. C.
AND COUNTY COMMISSIONERS
William J. Helsabeck, Chairman: Zack Wood, Claude Priddy, Ralph Tuttle, Harvey G. Johnson

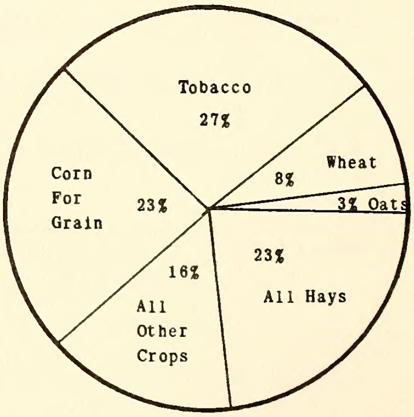
Number 28 June 6, 1968 Raleigh, N. C.

The following information was contributed by farmers to the County Commissioners through their Farm Census Supervisor and Township Listers. Township reports have been summarized and county totals adjusted for incompleteness. These data should be considered preliminary pending the availability of check data from other sources. *Township data available upon request.*

ITEM	UNIT	CROP YEAR	
		1966	1967
FARM LAND USES			
All Land in Farms	Acre	264,210	264,085
Harvested Cropland	' '	32,581	32,830
Idle Cropland	' '	36,140	37,446
Improved Pasture	' '	11,318	11,965
Unimproved Open Pasture	' '	12,857	11,748
Timber & Woodland	' '	158,122	a/
All Other Land	' '	13,192	170,096
MAJOR CROPS (HARVESTED ACRES)			
Corn, Harvested for Grain	' '	7,749	7,716
Corn, Cut Green for Silage	' '	455	400
Other Crops Cut Green for Silage	' '	25	36
Cotton	' '	-	-
Tobacco	' '	9,261	8,915
Peanuts Grown Alone, All Purposes	' '	-	-
Wheat, for Grain	' '	1,822	2,688
Oats, for Grain	' '	795	854
Barley, for Grain	' '	120	90
Other Small Grains for Grain b/	' '	516	563
Sorghums, for Grain	' '	116	188
Soybeans, for Beans	' '	826	820
Lespedeza, for Seed	' '	28	33
HAY CROPS HARVESTED			
Coastal Bermuda	' '	62	44
Soybeans & Cowpeas	' '	935	884
Small Grains	' '	1,721	1,507
Alfalfa and Mixtures	' '	201	103
All Other Hays	' '	4,951	5,019
OTHER CROPS AND VEGETABLES HARVESTED			
Irish Potatoes, Grown for Sale	' '	15	-
Sweetpotatoes, Grown for Sale	' '	2	6
Cucumbers, Grown for Sale	' '	c/	24
Snap Beans, Grown for Sale	' '	c/	12
Strawberries, Grown for Sale	' '	d/	20
Blueberries, Grown for Sale	' '	d/	-
Other Vegetables, Grown for Sale	' '	28	d/
Vegetable Gardens for Home Use	' '	2,773	d/
All Other Crops	' '	91	2,985
LIVESTOCK AND PEOPLE AS OF JANUARY 1		**1967**	**1968**
Sows & Gilts kept for Breeding	No.	415	420
Cows & Heifers 2 Years & over:			
Kept Mainly for Milk	' '	1,499	1,386
Kept Mainly for Beef	' '	2,714	2,873
Hens & Pullets of Laying Age	' '	102,124	92,385
Horses and Ponies, 2 Years & over	' '	e/	868f/
All People Living on Farm Tracts	' '	12,453	11,777
People who worked 100 or more days off farm during year	' '	2,560	2,602

a/ Included in all other land. b/ Alone or in mixtures. c/ Included in other vegetables. d/ Included in all other crops. e/ Not listed. f/ Total on all tracts of 5 or more acres.


PERCENT OF TOTAL CROPS HARVESTED


UTILIZATION OF ALL LAND IN FARMS

There were 264,085 acres in farm tracts in Stokes County as reported by farmers through the 1968 Annual State Farm Census of which 32,830 acres were utilized for the production of crops. Idle cropland increased 4 percent to 37,446 acres and improved pasture posted a six percent gain to 11,965 acres. Unimproved pasture declined nine percent to 11,748 acres. Changes in the harvested acreage of major crops were corn for silage at 400 acres- down 12 percent, tobacco at 8,915 acres- down four percent, wheat at 2,688 acres- up 48 percent, oats at 854 acres- up seven percent and all hay at 7,557 acres- down four percent. The January 1, 1968 livestock inventory showed sows and gilts at 420 head- up one percent, milk cows at 1,386 head- down eight percent, beef cattle at 2,873- up six percent and hens and pullets at 92,385- down ten percent. The number of people living on farm tracts was listed at 11,777 persons.

STATE LIBRARY OF NORTH CAROLINA
3 3091 00748 1427